Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Reserve
A 280.39
M34Ams

AMS-56 (1958)

LIBRARY
U. S. DEPARTMENT OF AGRICULTURE

# MARKETING SERVICE PROGRAMS

*conducted by*

## STATE DEPARTMENTS OF AGRICULTURE

Under the Agricultural Marketing Act of 1946

*in cooperation with*

## U. S. DEPARTMENT OF AGRICULTURE

October 1, 1956 – September 30, 1957

U. S. DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Washington, D. C.

# CONTENTS


Page

Introduction ..... 1

Types of marketing service work by major commodities:
- Fruits and vegetables ..... 4
- Dairy products ..... 4
- Poultry and eggs ..... 5
- Livestock ..... 6
- Grain ..... 6
- Cotton ..... 7
- Tobacco ..... 7
- Other commodities ..... 7

Summaries of marketing service work by States and by projects:

Alabama
- Improving and maintaining quality (seed) ..... 8
- Improving quality and expanding market outlets (poultry and eggs) ..... 8

Alaska
- Improving quality and handling methods, expanding outlets, and furnishing market information (potatoes, grain, eggs, and milk) ..... 9

Arkansas
- Improving egg quality ..... 9

California
- Improving quality and packaging (pears, tangerines, carrots, melons, grapes, oranges, and apples) ..... 9
- Developing methods of certifying nursery stock ..... 12
- Improving distribution of fresh and processed fruits and vegetables (pears, plums, prunes, potatoes, strawberries, and bush berries) ..... 13
- Providing new basic information (tree fruits and nuts and bush berries) ..... 14

Colorado
- Improving marketing practices (potatoes and eggs) ..... 17
- Improving quality of milk and dairy products ..... 18

Florida
- Obtaining new basic information (tomatoes) ..... 18
- Improving production forecasts (citrus) ..... 18
- Obtaining new basic information (citrus fruits) ..... 19

Georgia
- Improving quality and expanding market outlets for livestock ..... 19
- Improving the quality of seed and cornmeal and the efficiency of seed cleaning plants and corn mills ..... 19
- Improving quality and expanding market outlets for fruits and vegetables ..... 20
- Improving quality and expanding outlets for eggs ..... 20
- Providing new basic data and marketing information ..... 20

Hawaii
- Developing new and revised standards for grades of processed fruits and vegetables ..... 21

Illinois
- Improving methods of handling farm products and expanding market outlets (eggs, strawberries, cucumbers, and tomatoes) ..... 21

Page

Illinois--Continued
Improving marketing information (fruits and vegetables, livestock, and poultry and eggs) ..... 22
Expanding outlets for dairy products ..... 22
Improving facilities and packing and handling methods ..... 22
Providing new basic data (field crops, livestock, poultry, fruit, and timber) ... 23

Indiana
Demonstrating uniform grading procedures and improving quality (dairy products) ..... 23
Developing an orderly pattern of marketing farm products ..... 24
Improving product quality and the efficiency of vegetable canning plants ..... 25
Providing special market information and improving marketing efficiency (grain, frozen food locker plants, livestock, and fruits and vegetables) ..... 25
Providing new market information ..... 27
Developing an experimental market news program (hogs) ..... 27

Iowa
Providing new market information (livestock, dairy products, and corn) ..... 28

Kansas
Improving the quality of dairy products ..... 28
Improving marketing methods and expanding outlets (eggs, poultry, milk, dairy products, meat and vegetables) ..... 29
Furnishing new market information and basic data (grain) ..... 29

Kentucky
Improving marketing methods and expanding outlets (eggs, fruits, vegetables, berries, dairy products, livestock, and grain) ..... 30
Providing basic agricultural data ..... 30

Louisiana
Improving quality and expanding market outlets (vegetables, strawberries, and dairy products) ..... 31
Improving marketing methods and expanding outlets (poultry and eggs) ..... 31
Disseminating special market information (general agricultural products) ..... 31
Improving the packaging, handling, and transportation of farm products ..... 31
Improving cotton fiber quality ..... 32
Disseminating special market information (timber products) ..... 32

Maine
Improving marketing methods and expanding market outlets (potatoes, poultry and eggs, milk, red meats, apples, dry beans, maple syrup, and blueberries) ..... 32

Maryland
Improving handling methods for grain and soybeans ..... 36
Improving procedures for the quality control of vegetables for processing ..... 37
Improving methods of grading and marketing (livestock and wool) ..... 37
Improving the quality and merchandising of Maryland canned fruits and vegetables ..... 38
Providing new basic information (apples, peaches, and poultry and eggs) ..... 38

Massachusetts
Providing new basic data for vegetables ..... 38
Providing new basic data for cranberries ..... 39

Page

Michigan
Developing methods of certifying nursery stock ..... 39
Improving grading, handling, and packing (poultry and eggs and fruits and vegetables) ..... 40
Improving market news information ..... 40
Providing basic data and special marketing information (onions and fruits) .... 40

Minnesota
Developing methods of certifying nursery stock ..... 41
Improving quality and expanding market outlets (poultry, eggs, maple syrup, apples, and potatoes) ..... 41
Providing new basic data (milk, calves, turkeys, grain, and hogs) ..... 42

Mississippi
Improving milk quality and milk handling methods ..... 43
Improving egg quality and egg handling practices ..... 43
Improving and expanding outlets for vegetables ..... 43
Providing new basic data and marketing information ..... 44

Missouri
Improving quality and expanding market outlets (livestock, dairy products, fruits and vegetables, and strawberries) ..... 45
Providing new marketing information ..... 46
Developing an experimental market news program for poultry and eggs ..... 46

Montana
Improving the quality of agricultural products (dairy products and eggs) ..... 46
Providing basic data ..... 46

New Jersey
Expanding outlets for poultry and eggs ..... 47
Providing basic data and marketing information (fruits, berries, and vegetables) ..... 47

New York
Providing marketing information and expanding market outlets for New York agricultural products (eggs, dairy products, apples, vegetables, Christmas trees, livestock, and maple products) ..... 48
Improving facilities and marketing operations ..... 50
Providing new basic data ..... 50

North Carolina
Testing cotton fibers ..... 51
Improving marketing practices and expanding outlets (fruits and vegetables, livestock and wool, poultry and eggs, tobacco, and dairy products) ..... 51
Improving efficiency of cotton gins and cornmeal mills ..... 54
Improving facilities and methods for handling grain ..... 55
Providing new basic data ..... 56

North Dakota
Improving quality of milk and dairy products ..... 56
Preventing deterioration and contamination of grain in storage ..... 56

Ohio
Improving price information (grain and hogs) ..... 57
Providing new basic information (hogs) ..... 57

Page

Oklahoma
Improving quality and expanding market outlets (poultry and eggs, vegetables, hay, honey, pecans, and livestock) ..... 57

Oregon
Maintaining the quality of stored filberts ..... 58
Improving quality and marketing procedure (potatoes) ..... 58
Improving the quality and handling of seed ..... 59
Development of methodology for certification of virus-free fruit, tree nut and vine nursery stocks ..... 59
Improving estimates of crop production (filberts) ..... 59

Pennsylvania
Expanding market outlets ..... 60
Improving marketing facilities and methods ..... 60
Providing basic data (Christmas trees and eggs) ..... 60
Fruit tree survey ..... 60

Puerto Rico
Improving the quality of processed products by use of quality standards and regulations (gandures, canned guava nectar, native white cheese) ..... 60
Improving the grading, packaging, and merchandising of fruits and vegetables 61
Improving marketing facilities ..... 62

South Carolina
Improving and expanding production data and other marketing information .... 62

South Dakota
Providing marketing information and basic data (poultry and eggs, hogs, and grain) ..... 62

Tennessee
Improving marketing methods and expanding outlets (poultry and eggs) ..... 63
Improving livestock marketing methods ..... 63
Providing special marketing information ..... 64

Texas
Improving egg marketing ..... 64
Improving quality, grading, and handling practices, and expanding outlets (sweetpotatoes, watermelons, and grain) ..... 64

Vermont
Improving milk quality ..... 65

Virginia
Improving marketing methods (eggs) ..... 65
Improving grading and marketing methods (livestock) ..... 66
Improving marketing practices (apples and strawberries) ..... 66
Improving methods and facilities for handling and storing (grain and hay) ..... 66
Improving tomato processing ..... 66
Improving marketing facilities and handling methods (eggs and apples) ..... 66
Providing special market information ..... 67

Washington
Improving marketing methods and expanding outlets (honey and rhubarb) ..... 67
Providing special market information and basic data ..... 67

Page

West Virginia
Improving marketing methods (livestock, poultry, eggs, fruits, vegetables, and tobacco) ..... 68
Providing new basic data and experimental market news ..... 69

Wisconsin
Improving quality (dairy products) ..... 69
Improving marketing practices, expanding outlets, and conducting experimental market news (dairy products, fruits and vegetables, poultry and eggs, livestock and meat, and tobacco) ..... 70
Providing technical assistance to marketing agencies in improving operations . 72
Providing new basic data (dairy products, livestock, grain, cranberries, and vegetables) ..... 72

Wyoming
Improving quality of eggs, meat, and dairy products ..... 73
Supplying basic data ..... 73

Recent marketing publications by States ..... 74

Washington, D. C. June 1958

# MARKETING SERVICE PROGRAMS
# conducted by
# STATE DEPARTMENTS OF AGRICULTURE
# under the Agricultural Marketing Act of 1946

In cooperation with U. S. Department of Agriculture
(October 1, 1956-September 30, 1957)

## INTRODUCTION

Programs being conducted by State departments of agriculture under the matching-fund authority of the Agricultural Marketing Act of 1946 have these aims: To help marketing agencies, at each level of distribution, to put into use new techniques and methods as they are discovered or developed through research under the Act; to show marketing agencies how to improve or maintain the quality of products during the distribution process; to provide producers and marketing agencies more timely and complete marketing information; and to increase the consumption of farm products. These activities under the Act were begun in 1947.

In 1956-57, programs were carried on in 39 States, Alaska, Hawaii, and Puerto Rico. The States are:

| | | |
|---|---|---|
| Alabama | Maryland | Oklahoma |
| Arkansas | Massachusetts | Oregon |
| California | Michigan | Pennsylvania |
| Colorado | Minnesota | South Carolina |
| Florida | Mississippi | South Dakota |
| Georgia | Missouri | Tennessee |
| Illinois | Montana | Texas |
| Indiana | Nebraska | Vermont |
| Iowa | New Jersey | Virginia |
| Kansas | New York | Washington |
| Kentucky | North Carolina | West Virginia |
| Louisiana | North Dakota | Wisconsin |
| Maine | Ohio | Wyoming |

Assistance and guidance to the States in carrying out these programs is provided by the Liaison Office, Matching Fund Program, Agricultural Marketing Service. The Liaison Office last year prepared and distributed to the States a publication entitled "Guide to Procedures Relating to Marketing Service Programs Conducted under the Agricultural Marketing Act of 1946." This was a revision of an earlier publication. It incorporated a description of new forms and procedures involved in initiating and conducting projects, and new statements of policy, particularly with reference to the eligibility for matching purposes of various types of expenditures on promotional programs.

The Liaison Office helped in planning and conducting the annual National Marketing Service Workshop, held at Peoria, Ill., November 13 - 15, 1956. This 3-day workshop concentrated on the topic of finding ways by which State departments of agriculture could assist producers and marketing agencies in reducing costs of marketing. Participation in this event reached a new high, with 134 delegates from 35 States and the U. S. Department of Agriculture attending.

General guidance and direction to the matching-fund program is provided by the Advisory Committee on Cooperative Work under the Agricultural Marketing Act with State Departments of Agriculture. The present membership of that committee is: L. Y. Ballentine, North Carolina, chairman; C. J. Carey, California; George H. Chick, Maine; Roy Freeland, Kansas; and Stillman J. Stanard, Illinois.

To insure maximum effectiveness of their programs, the State departments of agriculture cooperate closely with industry and trade groups, producers, State extension services and experiment stations, vocational educational agencies, various agencies of the U. S. Department of Agriculture, and other groups. In 12 States, industry groups are helping to finance the work.

The States initiate these programs by submitting projects to the Agricultural Marketing Service for approval. Allotments are made to States for carrying on approved projects under cooperative agreements between the U. S. Department of Agriculture and State departments of agriculture, bureaus of markets, and similar State agencies. The 122 projects conducted during the period covered by this report were divided among the 4 major fields of marketing service authorized under the act. These fields are:

1. Expanding market outlets

   Activities in this field are aimed at both finding markets for local seasonal surpluses and increasing consumption of products chronically in abundant supply. The States have found that these two situations require somewhat different approaches and techniques. Effective action in resolving seasonal surpluses is dependent upon timely and reliable production and marketing information and the development of a good communication system with potential buyers. For the longer term surplus problems, more complicated and varied methods are required. Frequently, changes in grading, packaging, processing, and distribution methods are necessary to bring about increased consumption of an agricultural commodity on a sustained basis.

2. Maintaining product quality

   In preventing quality deterioration, State departments of agriculture determine firsthand the particular places and operations in the channels of marketing where quality losses occur, and the causes of the losses. With this background information, they assist producers and marketing agencies in determining what corrective actions are necessary. Assistance is provided in adopting improved methods and equipment for harvesting, processing, handling, storing, and transporting the various products, so as to establish the desired initial quality and maintain that level of quality in the product. For some products, this requires the development of objective methods of measuring quality and refinements in quality standards.

3. Reducing costs through improving efficiency of marketing facilities and operations

   In this field of work, producers and marketing agencies are shown the methods and kinds of handling and processing equipment best suited to their operations. Assistance is provided in improving existing facilities and in designing and locating new facilities, such as livestock auctions, poultry processing plants, grain elevators, milk plants, fruit and vegetable assembly markets, and food distribution centers.

4. Providing new basic data and market information

   a. Developing information and basic data useful in planning marketing programs. New information and basic data on both a State and local-area basis, relating to trends in production, changes in consumer demand, the competitive

situation in markets, storage holdings, and rate of disappearance, are collected, analyzed, and disseminated by Federal-State statisticians in the various States. These data are of value to producers and marketing agencies in planning programs. Information to provide a more dependable basis for crop estimates and projection of production trends is obtained through censuses of tree numbers and objective samplings of crops at various stages of growth.

b. Improving market news. With the trend toward decentralized packing and processing, the bypassing of terminal markets, and direct selling at country points, the need has increased for market news information at the local market level. To meet this growing need, experimental market news coverage is being provided for local markets not heretofore reported. If successful, these programs may be supported with regular funds at the end of the experimental period. If not, they are discontinued.

This progress report, prepared from material submitted by the States, presents: (1) The types of marketing service programs by major commodities, (2) summaries of work by States and projects, and (3) a list of recent publications issued in connection with the projects.

## Fruits and Vegetables

Marketing services to improve the marketing of fruits and vegetables were carried on by 31 States and Territories in 1957. These were Alaska, California, Colorado, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Puerto Rico, South Carolina, Texas, Virginia, Washington, West Virginia, and Wisconsin. Twenty-four States and Territories conducted activities to improve the quality of fruits and vegetables, 19 to expand market outlets, 11 to improve facilities and increase the efficiency of marketing operations, and 19 to provide new basic data and marketing information.

Work to improve or maintain quality included demonstrations and firsthand assistance to growers and marketing agencies in the adoption of proper methods of harvesting, grading, sizing, packing, handling, and transporting fruits and vegetables. The importance of harvesting these commodities at the proper stage of maturity so they would reach the consumer in acceptable condition was stressed. Several States continued work to develop more exact and reliable methods of measuring maturity and other quality factors as an integral phase of their programs to improve quality. Growers and shippers were kept advised of methods, developed through research, of preventing and reducing spoilage, and were assisted in adopting these methods.

The "buyer informational bulletin" was the device used by several States to facilitate wider distribution and improve demand for fruits and vegetables. These bulletins provided special information to brokers, truckers, and other potential buyers on the locations, anticipated supplies, varieties, and harvest periods of products expected to be in surplus. Georgia, Illinois, Indiana, Kentucky, Mississippi, Missouri, North Carolina, Oklahoma, and West Virginia utilized this technique for expanding outlets. Several States participated in the development and operation of special promotional programs for particular commodities. The scope of activities in this regard ranged all the way from preparing scripts for radio and television programs to assisting retailers in preparing displays and making effective use of point-of-sale material supplied by industry. Special surveys were conducted by several States to determine trade opinion about improvements in grading, packaging, and merchandising needed to secure greater trade and consumer acceptance of various products.

Several State departments of agriculture assisted in the planning of new and improved facilities for handling fruits and vegetables at the assembly and terminal market levels. In Georgia, Illinois, North Carolina, Virginia, West Virginia and other States, help was given operators of fruit and vegetable packinghouses with problems of selecting proper equipment, planning floor layouts, and adopting more efficient work methods. Work continued in some States on the problem of bringing about greater standardization in sizes and types of containers. Illinois, Michigan, New York, North Carolina, Virginia, and West Virginia gave particular emphasis to this activity.

Programs of the States to improve marketing information included issuance of more timely and detailed acreage and production reports, making of tree censuses, development of objective methods of estimating production, and establishment of a more complete and up-to-date system of market news reporting.

## Dairy Products

Work concerned with dairy products in one or more of the broad marketing service fields was carried out by the following 20 States and Territories: Alaska, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Mississippi, Missouri, Minnesota, Montana, New Jersey, New York, North Carolina, North Dakota, South Dakota, Washington, Wisconsin, Wyoming, and Vermont. Of these, 10 were engaged in quality improvement,

11 in expanding outlets, 19 in improving efficiency, and 8 in collecting and disseminating new basic data and better marketing information.

With respect to milk, the quality improvement programs emphasized the avoidance of contamination and control of bacteria through stricter sanitation procedures and temperature control. One State--Vermont--concentrated on the elimination of off-flavors and off-odors. Several States assisted manufacturers of dairy products in producing better quality butter and cheese by helping to identify the sources and correct the causes of contamination interfering with the development of desirable structure and flavor. This phase of the work also included assistance in improving processing methods which not only improved quality but frequently increased efficiency and lowered costs.

The programs of the States to expand outlets for dairy products were for the most part coordinated with such American Dairy Association promotions as June Dairy Month, and were in cooperation with State ADA groups. The State departments of agriculture, through their intimate contacts with distributors, retailers, restaurants, and news media, were able to add much to the effectiveness of these national dairy promotional campaigns at the local level.

Basic data on a State or county basis concerning the production and marketing of dairy products were collected and disseminated by several States, including New York, New Jersey, Mississippi, Wisconsin, South Dakota, and Washington. Marketing information releases containing statistics on dairy products were issued periodically by Indiana, Louisiana, North Carolina, Minnesota, and Wisconsin.

## Poultry and Eggs

Alabama, Alaska, Arkansas, Georgia, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Mississippi, Missouri, Montana, New York, New Jersey, North Carolina, Oklahoma, Tennessee, Texas, Virginia, West Virginia, Wisconsin, and Wyoming conducted programs to improve the marketing of poultry and eggs. Twenty of these 24 conducted programs in the quality improvement field, 12 in expanding outlets, 7 in improving efficiency, and 10 in providing new basic data and better marketing information.

Under the quality improvement programs, marketing specialists demonstrated to producers and marketing agencies the quality factors in eggs, the quality specifications of official grades, and the importance of holding eggs at proper temperatures and humidities. They conducted training schools to assist producers, egg assemblers, and their employees in becoming proficient in proper grading and handling procedures. In most of these States, specialists also assisted retailers in selecting display equipment designed to maintain egg quality, and they informed consumers, through various media, how to recognize quality factors in eggs.

Of the 12 States conducting programs to expand outlets for poultry and eggs, 5 were employing or preparing to employ State labels of quality to identify the product being promoted. Practically all States with programs of this type participated in industry-sponsored promotions such as January Egg Month.

The work to improve marketing efficiency involved assistance to egg-packing and poultry-dressing concerns in designing new facilities or redesigning old ones, planning equipment layouts and floor space allocations, selecting equipment best suited to their operations, and training workers in the most efficient work methods. One of the important objectives of this type of work with poultry dressing plants was to prepare them for operation under the national poultry inspection act. Improvement in egg assembly operations received the attention of several States. By rearranging pickup routes, specialists have enabled assemblers to make substantial savings in egg assembly.

Experimental market news programs were initiated in 2 States--Michigan and Missouri--and continued in 1--New York--to inform producers and marketing agencies about supply and price conditions at the local market level. Several States conducted surveys of poultry flocks on an area basis to determine the current status of the industry and to appraise the adequacy of the present marketing structure. These surveys were made under the supervision of the Federal-State statistician and provided information needed in planning marketing improvements.

## Livestock

During the year, 24 States and 1 Territory conducted marketing service programs relating to livestock. They are Alaska, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Missouri, Minnesota, Mississippi, New Jersey, Nebraska, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Activities to prevent injury to livestock represented an important phase of livestock quality improvement in several of the 11 States which conducted quality improvement programs. Demonstrations and exhibits concerning methods and equipment for preventing death losses and losses from bruising and crippling during the marketing of livestock were utilized in this work. Quality improvement of livestock in Kansas, Kentucky, Missouri, North Carolina, Virginia, and West Virginia was fostered through assistance to producers in obtaining high-quality breeding stock. Most of these States and others also carried on programs to encourage the use of grades in buying and selling livestock, as an incentive to quality improvement.

Several techniques for expanding outlets were used by the 13 States doing work in this field. Maryland, North Carolina, Virginia, West Virginia, and Tennessee continued to use special sales as the principal medium through which to broaden outlets. Two States--Kansas and Missouri--prepared and disseminated livestock brochures to promote the marketing of high-quality breeding stock. Several State departments took part in promotional campaigns, in cooperation with industry and trade groups, to encourage greater meat consumption.

Kentucky, Maine, Oklahoma, Virginia, and Wyoming helped to promote greater efficiency in the marketing of livestock and meat. Operators of livestock auctions and processing plants were helped with problems of remodeling facilities, selecting equipment, and improving work methods. More efficient plans were devised for assembling wool sold through wool pools. Schools were held to train retailers in proper methods of blocking, trimming, and preparing the various cuts of meat, and in storing and displaying it.

New basic data and improved marketing information relating to livestock were provided by Illinois, Indiana, Iowa, Kansas, Missouri, Minnesota, Mississippi, North Carolina, Nebraska, New Jersey, Ohio, Oklahoma, South Carolina, South Dakota, Washington, West Virginia, Wisconsin, and Wyoming.

## Grain

Programs to improve grain marketing were carried on in 21 States: Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Mississippi, Missouri, Montana, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Texas, Virginia, Washington, and Wisconsin.

The grain marketing programs of 6 of these States included activities to acquaint farmers and dealers with the requirements of official grain grades and to encourage the buying and selling of grain on a grade basis. Assistance to cornmeal mills in acquiring supplies of clean corn, preventing insect and foreign material contamination of corn and

corn products during storage and milling, and otherwise improving the quality of the finished products featured the grain programs in 2 States.

North Dakota was the only State which conducted a comprehensive program of preventing insect and rodent contamination in all grains. Both North Carolina and Virginia helped producers and elevator operators in overcoming problems of excessive moisture, through assistance in making moisture determinations and in installing proper grain-drying equipment.

In 8 States, programs were carried out to increase the efficiency of grain handling and other phases of grain marketing. Indiana, North Carolina, and Virginia were particularly active in helping to design new elevator facilities and to select and install proper equipment. Several States were instrumental in averting serious storage problems through advance planning of storage needs and the development of a clearing-house system to move grain from areas of deficit storage capacity to areas of surplus capacity.

Five States conducted surveys of grain movement to learn the volume of grain moving by rail, and participated in cases concerning rail rates on grain.

Providing basic data on acreage, production, varieties, and quality, and special information on the movement, supplies, and prices of grain was an important activity in 16 of the 21 States having grain marketing service programs. Ohio is the most recent State to initiate an experimental market news program for grain covering transactions at county points.

## Cotton

Marketing service programs designed to improve ginning and other cotton marketing operations were continued in Louisiana, North Carolina, and Virginia. In the latter two States, specialists collected cotton samples weekly from representative gins; conducted tests of fiber length, strength, fineness, uniformity, and maturity; and released the results every 2 weeks to cotton mills and merchants. This service helped buyers in locating cotton of the desired physical properties and improved the overall demand for cotton produced in the two States. North Carolina specialists also assisted a number of cotton mills in improving the blends of raw cotton used in spinning. Through these contacts with mills, specialists were able to advise ginners about mill requirements with respect to machining, cleaning, and conditioning of cotton.

## Tobacco

North Carolina and West Virginia continued programs providing assistance to tobacco farmers, through actual demonstrations of proper methods of sorting and otherwise preparing tobacco for market and of displaying the product on the sales floor. During the last season, the Wisconsin Department of Agriculture provided growers and marketing agencies with daily price information and quarterly reports on volume of sales, covering the two types of tobacco produced in the State. North Carolina again issued the "North Carolina Tobacco Report," which provided growers and marketing agencies with tobacco marketing information.

## Other Commodities

State departments of agriculture also helped producers and marketing agencies in improving the marketing of several other commodities such as seed, honey, maple syrup, dry beans, and forest products.

The following summary describes, in greater detail and project by project, the activities and accomplishments of each of the States in the program during the reporting year.

# SUMMARIES OF MARKETING SERVICE WORK BY STATES AND BY PROJECTS

## ALABAMA

### Improving and maintaining quality (seed) (ALA-A-1)

In Alabama and other States in the Southeast, there is a growing demand for high-quality seed of various crops--that is, seed of high purity and germination. Production practices can result in considerable weed-seed contamination, and also high moisture content which, unless remedied, is conducive to low viability. Under these conditions, much of the responsibility for improvement in seed quality rests on the processor. Activities under this project are designed to assist farmers and seed processors in adopting modern technological methods of cleaning and processing seed so that the higher level of quality necessary to meet the demand can be achieved. In conducting these activities, specialists made a plant-by-plant examination of equipment, facilities, and methods. After evaluating the operations of each plant, the specialists advised the operator of their findings, recommended improvements, and assisted in carrying out the recommendations.

Several special problems developed during the year which required some redirection of activities under the project. The 1956 crops of sericea lespedeza contained an unusually high amount of dodder seed, a noxious weed seed. Extra efforts were made to alert seed processors to this problem and to assist them in solving it. Seed specialists also had to devote increased attention to the difficult problem of cleaning Pensacola Bahia grass seed. The cleaning of this seed, production of which has increased rapidly in the State, requires highly precise adjustments in machinery.

Results under the program to improve the processing and handling of peanut seed reached the point where practically all of the seed processed last year was salable under the Alabama seed law. The Alabama seed specialists again participated in a regional meeting of representatives of the peanut seed processing industry in Alabama, Georgia, and Florida, with machinery manufacturers, and Federal and State agencies, at which improved practices and equipment for processing peanut seed were discussed.

### Improving quality and expanding market outlets (poultry and eggs) (ALA-A-2)

Egg marketing in Alabama has presented a serious problem in the past because of quality factors and because few eggs were graded and sized in accordance with recognized standards. In April 1955, the Alabama Egg Law was made effective as the initial step toward solution of the problem. This law requires that eggs sold in the State be graded and sized in accordance with prescribed standards, and that the containers in which they are sold be so marked.

The Alabama Department of Agriculture and Industries developed a marketing service program to implement the law through assistance to producers, wholesalers, and retailers in improving egg handling and grading methods. Assistance has been provided mainly through actual demonstrations of proper candling and grading procedures at meetings, fairs, and other events, and at egg grading schools. During the last year, particular emphasis was placed on work with retail grocers to improve display methods for eggs. The old way of marketing eggs from wood boxes, baskets, and paper bags has about disappeared.

Benefits from the program were reflected last year in the adoption of official grades in buying and selling by several more egg plants. Specialists of the Alabama department assisted these plants in the training of workers to candle, grade, and pack eggs properly, and in the adoption of proper storage and handling practices.

## ALASKA

Improving quality and handling methods, expanding outlets, and furnishing market information (ALAS-A-1)

Potatoes. --The Alaska Department of Agriculture continued its program of assisting the potato industry in improving marketing. New growers were advised about proper methods of harvesting, grading, and packaging. The use of 10-pound Pliofilm bags, introduced the previous year on a trial basis, has been adopted by both the military and civilian markets this year. About 40 percent of the 1956 crop was marketed in this container, with savings in packaging costs equivalent to about 15 cents per 100 pounds. Marketing specialists assisted in planning two new storages and in remodeling the potato grading plant and equipment layout of the potato marketing cooperative at Palmer.

Grain. --Assistance was provided during the year in establishing commercial facilities for drying locally produced grain and in developing plans for a complete feed manufacturing mill. These facilities will make it possible for Alaskan dairymen to utilize locally grown feed concentrates.

Eggs. --The Alaska department cooperated with a large shipper in testing direct shipments of eggs from farms in the States to Alaska markets. It was found that, when proper refrigeration practices were followed, these eggs reached Alaska with 16 to 20 percent higher quality than those shipped through regular channels. Work was continued with wholesalers and retailers to improve egg storage and handling. Several egg-grading schools were held to demonstrate to producers and marketing agencies proper methods of candling, grading, and packaging eggs.

Milk. --The Alaska department continued work with producers and distributors to improve milk quality, particularly through efforts to prevent the development of off-odors and off-flavors. Information obtained from States conducting milk quality improvement programs was utilized in this activity.

## ARKANSAS

Improving egg quality (ARK-A-1)

In Arkansas, the program of assisting egg producers and handlers to improve quality was continued. This work was conducted through meetings at which proper methods of candling, grading, and sizing eggs were demonstrated, and through egg grading schools for egg handlers and their employees who desired intensive training in proper egg marketing practices. The quality program is facilitating compliance with the grade and labeling requirements of the Arkansas Egg Law and has resulted in an increase in volume of graded eggs sold at retail in the State.

## CALIFORNIA

Improving quality and packaging (CALIF-A-1)

Activities under this project are concerned with development of improved standards of quality and maturity for fruits and vegetables and better methods of sizing, grading, and packaging.

During the last year, work was continued on the following phases of this project: (1) California Bartlett pear sizing practices; (2) California tangerine sizing; (3) carrot containers in California; (4) Crenshaw melon maturity; (5) Perlette grape maturity in the Coachella Valley; (6) Persian melon maturity; (7) Thompson Seedless grape maturity in the Coachella Valley; and (8) watermelon maturity.

Field work was reactivated on measuring the freezing damage to Washington Navel and Valencia oranges, and a new study of apple maturity was started involving maturity standards as applied to varieties by districts.

California Bartlett pear sizing practices. --The purpose of this phase of the project was to determine if there was uniformity of sizing between districts, and to establish a standard for the measurement of pears placed loose in containers and marked with a specific count size, such as "165 size." Such count size refers to the standard pack in the standard California pear box. All districts use the same count per standard box, but the size (diameter, weight, and length per pear) varies. Trade practice indicates that the general belief is that Lake County pears are longer than River pears. No real difference can be substantiated by the tests. The project indicates that, on an average, certain diameter measurements should be adhered to in relation to "count size" designations used on pears loose in a container, to indicate size by count in relation to standard box counts and sizes.

California tangerine sizing. --The purpose of this work was to establish size measurements for tangerines being prepared for market. Although most tangerines are sized before they are shipped, and are designated by size as small, medium, large, jumbo, or extra jumbo, there has not been uniformity among packers and shippers as to the actual diameters of the fruit in each size category. Industry members would like to see definite size categories established. Such categories would be helpful to industry members in their own grading programs, and would also provide a basis for the establishment of legal size designations. Desirable size limitations have been determined for the size designations indicated here.

Carrot containers in California. --A survey was made to determine and evaluate the containers being used for shipment of carrots. The container situation has been unsettled, and the carrot industry desired a revision of the standards to eliminate those that were not satisfactory.

The data showed that many containers, at one time standard, were no longer used, and some in use were not entirely satisfactory. As a result of this survey, the California legislature in 1957 enacted a law to standardize 6 of the containers, effective September 11, 1957.

Crenshaw melon maturity. --This phase of the project was undertaken to find a minimum maturity standard for Crenshaw melons. There are now no definite maturity requirements for Crenshaw melons in the California Agricultural Code, so the establishment of an objective test would help the industry in its harvesting and grading programs, and would also provide a basis for establishment of a legal minimum. From two seasons' study, it appears that flesh color or a minimum soluble solids requirement might be equitable as a basis for objective tests.

Perlette grape maturity in the Coachella Valley. --The purpose of this work was to provide a better maturity standard for Perlette grapes grown in the Coachella Valley. These grapes are required by the Agricultural Code to meet a minimum maturity of 16 percent soluble solids. Growers believe that the minimum maturity should be raised to 17 percent soluble solids, or 16 percent soluble solids plus a suitable sugar-to-acid ratio.

The figures compiled during the study indicate that there are no appreciable changes in the soluble solids readings from the start of the season to its finish. The sugar-to-acid ratio did not increase significantly as the season progressed.

This project was continued during the 1957 season. Results have not been compiled.

Persian melon maturity. --The only maturity requirement mentioned in the California Agricultural Code relating to this melon is, in part, that the melons "shall be mature but not overripe." Growers and industry members have urged that studies be conducted to determine a definite index of maturity. The establishment of an objective test, which is

the purpose of this work, would be helpful to the industry in harvesting and grading, and would provide a basis for a legal minimum.

It appears that soluble solids and flesh color improve gradually as the melons mature, and tests made in this project indicate that these factors might be used as a minimum maturity standard.

Thompson Seedless grape maturity in the Coachella Valley. --The purpose of this work was to re-evaluate the present maturity standard for Thompson Seedless grapes produced in the Coachella Valley. These grapes are required by the Agricultural Code to meet a minimum of 17 percent soluble solids. The problem is that on hot, humid days during the harvest season, the grapes fail to reach that minimum of soluble solids. Some growers believe that, even though the grapes are low in soluble solids (they are also low in acid), they are very palatable. The growers also believe there is a need to have a combination of maturity determinants, such as soluble solids plus sugar-acid ratio.

The results of the 1956 work were somewhat inconclusive, but indicated some changes in the maturity determinants on the days when high humidities occur. The 1957 data, although not yet compiled, strongly indicate that present maturity tests are very reliable and that high humidities have little, if any, effect on the soluble solids content. This work will be continued.

Watermelon maturity. --The only maturity requirement for watermelons given in the California Agricultural Code is, in part, that the flesh of watermelons shall have not less than 75 percent red color. The color of the flesh is one of the most commonly used methods of determining satisfactory maturity, and it could be determined more objectively if a standard color chart were adopted. Soluble solids content of the juice from the flesh of a watermelon increases as the melon matures, so a measurement of the solids may also have possibilities as a maturity determinant. Studies were made on 3 important Klondike types of watermelons in 2 important producing areas in 1953, 1954, 1955, and 1956, and the figures show that both flesh color and soluble solids show possibilities as maturity determinants. A color chart has been prepared for use on watermelons.

Freezing damage measurement in Washington Navel and Valencia oranges. --The purpose of this phase of the project was to determine the possibilities of changing, in part, the standards for these fruits now in the Agricultural Code of California. It was proposed that part of the standard, which pertains to drying on 20 percent or more of the exposed pulp on a transverse surface cut through the center, be changed to provide a more exact method of scoring an individual specimen, based on whether the fruit has a certain percentage of drying on a stem-end cut or blossom-end cut or center cut.

It was found that a greater number of oranges were damaged in the stem end by freezing or other drying than in either the center or the blossom end. Fruit which had up to 20 percent damage in the center cut also had considerable damage on either the stem or blossom end, or both. A formula for a new standard to measure drying in oranges, based on this report, has been prepared and presented to the industry for consideration and action.

This project was not conducted during the 1956 season, as freezing damage was insufficient to make the project worthwhile. In 1957, the project was again conducted on a limited basis. The 1957 figures have not yet been tabulated, but indications are that the results will be comparable with the figures obtained in 1954 and 1955.

Apple maturity by districts. --This work was initiated in July of 1957 to determine if maturity recommendations based on previous studies by the California Department of Agriculture would apply in all apple-producing areas of California, and if other maturity-determinants could be developed.

The California legislature passed a law on apple maturity, effective September 11, 1957. This law was based principally on earlier work done by the California department

under a matched-fund project. The law, in part, states that release dates by districts in the State for picking different varieties of apples shall be made by county agricultural commissioners and the State department of agriculture, based on various indexes of maturity, such as soluble solids content of the juice, pressure test, size, color, condition of the flesh, or other recognized methods of measuring maturity.

Tests are now being conducted in 11 counties, with the cooperation of the county agricultural commissioners involved, to determine the effect of the recommended maturity standards. From the tests made so far, it appears the standards recommended as a result of the previous work will be satisfactory for minimum maturity standards in all areas.

Developing methods of certifying nursery stock (CALIF-A-2)

This project is being conducted in cooperation with several State and Federal agencies. The objective is to develop a virus-free certification program so as to improve the quality of nursery stock and increase market outlets. To accomplish this objective, it is necessary to devise practical methods for detecting, identifying, and eliminating virus diseases affecting nursery stock. Attainment of this goal would be of great economic benefit to the California tree fruit, nut, and grape industries. Research on virus diseases has demonstrated the need for virus-free planting material if uniform and fully productive orchards and vineyards are to be established and maintained.

Activities last year extended into 24 counties and involved 53 nurserymen. Most of the work was carried on in the San Joaquin and Sacramento Valleys, where the field plots and the bulk of the propagating source plantings are located. The work has been concerned with almonds, apricots, plums, prunes, peaches, nectarines, cherries, and grapes, and has been along the following lines:

1. Compilation of an inventory of present understock cutting and seed sources.

2. Field examination of propagating sources of trees and vines, including understock seed and cutting sources.

3. Indexing or transmission tests, as an aid to the examination of budwood source trees and understocks for virus diseases.

4. Inquiry into the current status and availability of virus-free budwood and understocks.

5. Investigation of new and improved diagnostic methods.

6. Bringing up to date the information on diseases occurring in budwood source plantings and areas.

7. Investigation of the feasibility of developing special propagating sources which would remain free of virus diseases.

8. Investigation of the feasibility of modifying certain nursery and fruit tree breeding practices so as to avoid the introduction and perpetuation of virus diseases in nursery stock.

9. Investigation of new diseases found during the work, and extension of knowledge concerning previously known diseases.

10. Further development of registration and certification programs for cherry and grape nursery stocks.

11. Collaboration with other agencies and with nurserymen in the actual establishment of formal programs for registration of propagating source plantings free from

serious virus diseases, as a preliminary step in establishing formal certification programs.

12. Increased work on the mass indexing of nursery budwood source trees of Shirofugen flowering cherry for latent ring spot viruses as a means of (a) demonstrating to the nurserymen the occurrence of latent viruses in their source trees, and (b) securing sources free of latent ring spot viruses for use in future registration programs.

Instruction and training in the detection of virus and virus-like diseases, including demonstration of the diseases, were given in the field to State and county inspectors. Progress in the work has materially benefited from continued close cooperation with members of the staff of the United States Department of Agriculture, the University of California Agricultural Experiment Station, horticulturists, nurserymen, fruit tree breeders, and growers. In August of this report period, pathologists working on this project participated in a plant disease conference at Stanford University, Palo Alto, Calif., where an opportunity was provided to exchange ideas with research workers, pathologists, regulatory officials, and others doing similar work. Prior to this conference, pathologists from Utah and Washington State, from British Columbia, and from the University of California visited this project at Sacramento to exchange technical information on specific diseases.

Information obtained in the work has been incorporated into 5 articles, 3 already published and 2 now in press.

Registered mother blocks of cherry and grape are now being established in accordance with regulations of the California Department of Agriculture. These regulations are now a part of the California Administrative Code.

Improving distribution of fresh and processed fruits and vegetables (CALIF-B-1)

Under this project, the California department provides assistance in the form of marketing surveys to industries which operate self-help marketing-order programs. Survey purposes include improving marketing efficiency, overcoming obstacles to distribution and sales, achieving market stability, expanding the market and product utilization, and effecting improvements in quality, packaging, and measurement and improvement of sales promotional activities.

During the year, assistance of this type was given to California growers, handlers, and processors of canning Bartlett pears, fresh peaches, fresh plums, dried prunes, long white potatoes, strawberries, and boysenberries.

This work involved the collection and analysis of economic and marketing information of value in solving marketing problems confronting agricultural industries of California. In the work done this year, cooperation, particularly in the collection of information, was given by the following agencies and groups: University of California Agricultural Extension Service and Experiment Station; Agricultural Marketing Service and Western Utilization Research Laboratory of the U.S. Department of Agriculture; the United Fresh Fruit and Vegetable Association; and railroad claim-adjusting agencies. Other basic information needed was obtained from the distributive trade and commercial users.

A summary of the activities with respect to each commodity follows:

Canning Bartlett pears.--The possibility of conducting a food trade survey of advertising effectiveness for the Program Committee of the Marketing Order on Canning Bartlett Pears was investigated in December and January of the last fiscal year. The investigation pointed to a need for better knowledge of the fundamentals of effective advertising, rather than for a survey of advertising effectiveness. The finding is considered significant in several respects, for it has served to emphasize the importance of a basic

knowledge of the fundamentals of advertising and other promotion as a factor in decision-making processes of industry groups in their efforts to expand product demand.

Fresh peaches and fresh plums. --On joint request of the California advisory boards for fresh peaches and plums, a survey was undertaken in May 1957 of the intra-State marketing of these fruits. Main objectives of the survey were to secure some indication of the effectiveness of past industry promotional efforts, and information for furthering these efforts in the future. The information obtained in this survey is being analyzed.

Dried prunes. --A survey report for dried prunes was completed. The report received wide dissemination; copies were mailed at industry expense, and a condensed version and excerpts were published in extensively circulated industry periodicals. Acting upon survey findings and recommendations, the industry revised its program of merchandising promotion substantially, revised its selling approach in consumer and trade advertising, and began planning a consumer survey and research on product improvement.

Long white potatoes. --Conclusions and recommendations on problems of marketing long white potatoes, based on information obtained in a trade survey, were presented to the California Long White Potato Board and the industry in general. The proposals are being adopted by the board in formulating its marketing policy and promotional plans, and are also proving helpful to individual growers and handlers.

Strawberries. --Information on fresh strawberry marketing, obtained in the course of the potato survey, was furnished to the Strawberry Advisory Board. The board is using the information as a guide in formulating its marketing policies and promotional programs. At the request of the board, additional information, particularly on processed strawberries, is being assembled.

Bush berries for processing. --At the request of the Bush Berry Advisory Board, the California department conducted a followup survey on bush berries for processing, mainly boysenberries. The board desired to learn the nature of changes in the distribution and utilization of boysenberries since the 1955 survey was made.

In addition to their work on regular project activities, marketing specialists of the California department served as consultants to various industry groups on numerous occasions. Managers of California advisory boards, for example, requested and received these services in conjunction with development of plans for a national survey on the use, value, and effectiveness of industry point-of-sale material used in merchandising promotions.

Providing new basic information (tree fruits and nuts and bush berries) (CALIF-D-1, D-2, D-3, D-4)

Fruit and nut acreage surveys. --The objective of this work is to develop and to keep current more complete and reliable basic data covering the bearing and nonbearing acreages of tree fruits, tree nuts, and vines; each by kinds, by major varieties, by age groups, and by counties in the State. Data acquired in conducting these surveys are summarized, published, and disseminated each year in bulletin form. Extensive use is made of these data by growers, cooperatives, dealers, shippers, processors, financial and transportation agencies, Federal and State marketing-order advisory boards, Government officials, and others. The data also are basic to the development of seasonal forecasts and estimates for these crops as made by the Federal-State Crop Reporting Service, and to the objective sampling projects described in the latter part of this report.

In conducting the work, farm-to-farm surveys are made to determine the standing acreages of the fruit and nut crops involved, as well as to record new plantings and removals of older plantings. The surveys are made in all counties of the State. Data obtained are systematically recorded under a uniform and continuing plan. This procedure provides a set of permanent records which not only show current acreages classified as

noted previously, but also reveal annual changes in acreages, indicating the present and future potential production of these crops. Complete enumeration of fruit and nut acreages is made periodically under a staggered schedule. Annual surveys of new plantings and removals provide data for adjusting the previously recorded standing acreages to a current basis. The field work is done in cooperation with the county agricultural commissioners, who provide additional field men, clerks, transportation, and office space to the degree that their resources permit. The field work and the keeping of records is performed under the direct supervision of the California department.

These acreage survey activities during the last year were carried on in all of the fruit and tree nut producing areas in the State. The summarized records obtained in this survey work in 1956-57 were published in bulletin form.

Bush berry acreage and production surveys. --This phase of the acreage survey work embraces the determination of the acreage of commercial bush berries in the State, broken down into blackberries, boysenberries, youngberries, loganberries, and raspberries, and also the production, utilization, and total value of these commercial crops. Data are obtained and published for the five principal types of bush berries. The annual farm value of commercial bush berry crops in the State exceeds $3 million. Moreover, these crops are highly perishable and costly to produce, and their prices are sensitive to imbalance between supply and demand. Thus, growers and processors have a real need for current information on the seasonal supplies.

A procedure was set up through which the desired acreage data could be obtained through field surveys, and one man is employed about a month each year to do the field work. Experience gained to date indicates that the field data can be obtained by mailed survey, with an interview followup to contact all nonrespondents and to locate new growers.

The annual survey last year was made early in the year, and a report was published in March 1957. Copies of this report were made public and supplied to interested parties locally and in other Pacific Coast States.

There was no formal participation by other agencies in carrying out this project. Valuable cooperation was given by the various groups and individuals connected with producing and marketing these crops, as well as by county agricultural commissioners and county farm advisors in some of the areas where these crops are grown and by processors.

Development of objective methods of estimating production (Cling peaches, Bartlett pears, and grapes)

The purposes of this work are: (a) To determine if objective sampling methods can provide a practicable basis for making dependable forecasts and estimates of deciduous tree fruit and grape crops; (b) to design, develop, and test methodology; (c) at the same time, to provide forecasts developed from the project, for use by marketing-order advisory boards and industry members.

Serious problems are encountered annually in this State by growers, shippers, and processors in attempting to achieve efficient marketing of these crops. In making plans, there is urgent need for reliable early-season forecasts of production.

Elimination of the estimated surplus portion of the crop of Cling peaches is a permissive feature of the State marketing order. Subject to recommendation by the Cling Peach Advisory Board and approval by the Director of Agriculture, a large surplus may be dealt with by eliminating part of the fruit prior to harvest; that is by removing immature fruit from the trees. The remainder of the surplus may be dealt with by cannery diversion; that is, diversion of the fruit after delivery to canners. The first step eliminates some fruit beyond recall and is based solely on preharvest estimates of the size of

the crop. The second step, or cannery diversion, may be adjusted as the harvest progresses, but may not exceed 10 percent of deliveries at any time. Small surpluses are usually dealt with by cannery diversion alone.

For Bartlett pears, the only restrictions placed to date on the volume of the crop marketed have been those resulting from grade and size regulations. However, these regulations are also altered somewhat, depending on preharvest estimates of the size of the crop. For all three crops--Cling peaches, Bartlett pears, and grapes--the estimated size of the crop is the most important factor in the price bargaining between processors and producers, much of which takes place before harvest starts.

From this situation, it can be seen that errors in the preharvest estimates can result in any one or a combination of the following circumstances:

a. Inequitable prices to producers.

b. Carryover stocks of processed fruit which are out of balance with demand and result in unstable prices in the following season as well as in the current season.

c. Unbalanced utilization, for example, between quantities marketed fresh and those processed, or between quantities of grapes laid to raisins and those crushed for wine.

This work was undertaken in response to urgent requests of industry groups for the development of methods which would produce more dependable forecasts and estimates.

The procedures involved in this work may be briefly sketched as follows: Samples are carefully designed for surveys of each crop separately; sample orchards or vineyards, blocks, and individual trees or vines are selected for sampling, with consideration for geographic distribution, varieties, age groups, sizes of producing units, etc., so that the samples drawn will be actually representative of each statistical universe involved. Next, the difficult and exacting field sampling procedures are carried out to obtain the sample data required.

Sample data basically include counts of immature fruit and size measurements on a subsample of the fruit counted. The estimating procedure which has shown the most promise has produced a ratio type of estimate, in which the product of the changes in counts, size, and bearing acreage from a base year to the current year, multiplied by production in the base year, yields the estimated production for the current year. Actually, it is necessary to estimate before harvest what the changes in counts and sizes (from base year to current year) will be at harvest.

It has been assumed that the count ratios are about the same before harvest as at harvest for all three fruits and, therefore, the preharvest count ratios have been used in the estimating equation without further adjustment. However, the heavy drop of peaches just before harvest in 1957 indicates the need for further study along this line. In the earlier stages of these projects, counts of fruit were determined by stripping all of the immature fruit from an entire tree before counting. This had been quite expensive, primarily because payment had been made for the fruit so destroyed. To reduce the costs of counting fruit, procedures were developed in 1956 and continued in 1957 for counting the fruit on a part of the tree, without removing the fruit. For the first time, the experimental forecasts of production of Bartlett pears and grapes were based on on-tree and on-vine counts. While final production data for the year are not yet available, these results look quite promising. Cling peaches were counted both on-tree and by stripping, but the data for the on-tree counts have not yet been summarized.

Projecting size ratios from early season to harvest is a little more complex than using count ratios, since growth may vary from year to year in rate and duration. For Cling peaches, the size ratios at reference date (when the pit begins to harden) have proved quite reliable in predicting directly the harvest size ratios. The basic relationships involving size growth in grapes are still under study, although it has been fairly

well established that bunch lengths have reached their maximum by late June or early July. For Bartlett pears, the length of time to maturity seems to be so variable that the June size ratios do not predict directly the harvest size ratios. Therefore, it has been necessary to project the actual harvest diameter by estimating the daily increment in diameter and the number of days to harvest. Some refinements in this approach appear to be needed, primarily stretching out the period over which sizes are measured in order to determine more accurately the daily increment.

The results of this work thus far indicate that reliable forecasts and estimates for peaches and pears within specified ranges of error can be developed out of the methods employed. Good progress has been made toward expanding and improving the complicated and exacting job of obtaining sample data. Considerable useful byproduct information also comes out of the surveys, such as data on the variations in sizing rates of fruit; advance information on the degree of injury to fruits from insects, disease, and weather; and early indications of sizes and grades at maturity. Since project work on grapes began during the 1956 season, it is too early to appraise the results fully.

The efficiency of techniques and methods employed in these projects and the validity of results from them are yet to be fully established. Problems relating to the mechanics of this type of sampling remain unsolved. Further experimentation is required to test and evaluate techniques in use, and to introduce and test modifications where they are indicated. There should be additional emphasis on measuring the effects upon production of "drop" or "shed" of immature fruits, of seasonal differences in fruit sizing, weather factors, late-season disease, and insect damage, in order to correct early-season forecasts and to evaluate them properly. However, if, as expected, the methods will provide a basis for dependable early-season and preharvest forecasts of these fruits, free of judgment, bias, and error, they will be of incalculable value to growers in formulating and carrying out programs for the intelligent marketing of their crops. Once developed and proved, the methods would be applicable for succeeding years and would be available for application to similar crops here and elsewhere.

The statistical unit of the Giannini Foundation for Agricultural Economics at the University of California has continually cooperated in setting up and carrying out the work under these projects, particularly with respect to the design of samples and the extensive statistical analysis involved. Members of the staff of the College of Agriculture also have been especially helpful in technical features involved in these projects.

## COLORADO

### Improving marketing practices (COLO-A-1)

Potatoes.--The Colorado Department of Agriculture worked on a series of jointly financed market surveys with the committees administering the State marketing orders for the San Luis Valley and northern Colorado areas, to determine what changes are needed in packing and handling potatoes so as to meet the requirements of the wholesale and retail trade.

During the year, marketing specialists contacted 24 retail stores in the Denver metropolitan area to obtain information on the condition of potatoes on display. The store managers were interviewed to obtain their opinions on trade and consumer preferences with respect to size, variety, color, washing, waxing, and packaging of potatoes. Other activities conducted under this program included tests on potatoes shipped from the San Luis Valley to the Denver market to determine the amount of shipping damage. This work indicates there is a need to improve handling methods at both wholesale and retail levels. Tests made on the potatoes shipped from the San Luis Valley to the Denver market indicated a loss from shipping damage of about 6 percent.

Results of these surveys and tests were presented to the administrative committees and industry members for their consideration in improving marketing practices.

Eggs. --A survey was made to obtain information on the source of supply of eggs consumed in Colorado, market preferences for the various grades and sizes of eggs, and other basic marketing information. The information will be used to formulate a plan for improving egg marketing.

Improving quality of milk and dairy products (COLO-A-2)

The work on this project was completed during the fall of 1956. The results of the survey of off-flavor milk were widely used by the Colorado dairy industry.

## FLORIDA

Obtaining new basic information (tomatoes) (FLA-D-1)

The current objective of this project is to contribute to a more orderly marketing of Florida tomatoes by collecting and disseminating information concerning the rate of planting and development of the crop. The information is needed by the Florida Tomato Committee, which operates the Federal marketing agreement and order regulating the handling of Florida tomatoes. That committee was instrumental in sponsoring the project, so that it could better arrive at decisions on the establishment and application of marketing regulations. The information is needed also by growers, to guide them in adjusting their planting schedules so as to maintain, insofar as is possible, a desirable balance between market supplies and demand; and by local marketing agencies and retail organizations, in planning their marketing programs.

Operation of the project is under the direct supervision of the Federal-State agricultural statistician in charge of the Orlando, Fla., office. Three special field supervisors are stationed in the principal tomato-producing areas. Each supervisor, through personal contact with growers, learns the number of acres of tomatoes planted or set each week. This information is then assembled, reviewed, and summarized, and is published by the following Tuesday. Thirty-nine weekly reports were issued during the 1956-57 planting and harvesting season. The first report was issued on August 28, 1956, and the final report for the season on May 11, 1957. In addition to the weekly plantings by areas of production, these reports carried a narrative report on weather and crop progress, and a table showing current and historical weekly tomato shipments from Florida.

During the summer, the supervisors gathered actual check data on production from individual acreages, for use in improving the seasonal estimates of production. The first report for the 1957-58 season was issued August 14, 1957, and the series will continue to be issued weekly throughout the season.

Inasmuch as the project has operated for only 1 year, it is difficult to evaluate its effects on the industry. It has met with great favor with the vast majority of those in the industry. Regardless of any specific use which may be made of the information in these reports, their main achievement will always be a better understanding and knowledge by the industry of the basic facts in an industry which has been characterized by rumors and uncertainties, generally used to the growers' disadvantage.

Improving production forecasts (citrus) (FLA-D-2)

A program of objective counts and measurements, designed to aid in providing more accurate forecasts of citrus fruit production in Florida, has now entered its second year of full operation. A greater degree of accuracy in preseason forecasts is desired by the industry to provide a basis for better planning of marketing operations.

Several possible approaches to the problem were considered in initiating this work in April 1956. The application of sampling techniques to measure the size of the crop directly by fruit counts and measurements seemed to offer the greatest promise. Plans

were made to incorporate into this project a frame count, a limb count, and growth and droppage surveys. The frame count furnishes an estimate of the number of fruits per unit of bearing surface area. It consists of counts of the number of fruit coming within a horizontal projection of a two-feet-square frame placed against sample trees. The limb count estimates the average number of fruits per tree by counts of fruits on limbs selected with known probabilities on sample trees. The growth survey gives an estimate of the average size of the fruit at monthly intervals between August and harvest, by measuring the circumference of sample fruit. The droppage survey estimates, each month, the number of fruits that have fallen from the average tree since counts were made. Presample observations were taken and analyzed to determine the size and design of the samples required, and the samples were drawn. This work was completed in July 1956.

Field work was started on the second-year series August 1, 1956. The limb count began August 1, 1956, and was finished September 15, 1956. Four supervisors and 16 enumerators were employed, trained and sent to the field where they counted approximately 450,000 fruits on 3,600 sample trees. The frame count was made during the period August 1-21, 1956. Four enumerators counted the fruits in 8,491 frames and made 6,000 fruit measurements for the August growth survey. The September 1956 growth and droppage survey was made between September 16 and 30, with drops counted under 900 trees and 10,000 fruits measured. Field work continued on growth and droppage until May 1957.

Analysis of the data collected in this second year of the survey was to be completed in time for use in making the initial forecast of the 1957-58 season, scheduled for release October 10, 1957. The effectiveness of these techniques as a practical means of forecasting citrus fruit production cannot be determined until they have been tested for a few years by a comparison of preseason forecasts to past-season production estimates.

Obtaining new basic information (citrus fruits) (FLA-D-3)

The field work on a citrus tree census, initiated in August 1954, was completed during the year. The data are being summarized preparatory to publication of a report.

The completed census showed about 45.7 million citrus trees of all varieties and ages. Of this number, nearly 43.5 million were in commercial groves and the remainder consisted of small-scale plantings for home use. Nearly 10.3 million, or about 24 percent, of the 43.5 million trees in commercial groves were of nonbearing age.

## GEORGIA

Improving quality and expanding market outlets for livestock (GA-A-1)

Work under this project was not initiated during the year.

Improving the quality of seed and cornmeal and the efficiency of seed-cleaning plants and corn mills (GA-A-2 and GA-A-5)

With respect to seed, the major attention was given during the last year by the Georgia Department of Agriculture to the problem of processing high-quality seed peanuts. Tests conducted at the department's seed laboratory during the year revealed that poor germination of seed peanuts is usually associated with mechanical injury which occurs in the shelling plant. Losses of as much as 35 percent in germination, caused by improper shelling, were found in some cases. Results of this survey were made available to the 39 peanut shellers in the State, and those shellers having difficulty in processing seed of optimum viability were assisted in overcoming the mechanical problems responsible.

The work with corn mills has as its objectives improvement of the quality of cornmeal products through the development of sources of clean grain and the institution of

proper sanitation and insect and rodent control programs; increase in the efficiency of milling operations through improvements in facilities, equipment, and work methods; and expansion of outlets for cornmeal products. Activities were carried on during the year in all these phases of the program. In cooperation with the Georgia Corn Millers Association, the Georgia department developed a standard of quality for cornmeal products. This standard is to be used by the association in approving the use of its "Seal of Approval" by corn millers on their products.

Improving quality and expanding market outlets for fruits and vegetables (GA-A-3)

Prior to the vegetable marketing season in south Georgia, the Georgia Department of Agriculture assembled information concerning the expected acreage, production, varieties, and time of marketing of the major fruit and vegetable crops. This information was used by marketing specialists assigned to the northern terminal markets in acquainting buyers in those markets with the prospective supply situation and in helping these buyers to develop plans for procurement and distribution of Georgia fruits and vegetables. Other specialists of the Georgia department were stationed at the assembly markets in the State, to assist growers in complying with marketing regulations pertaining to minimum quality and to demonstrate proper methods of sorting, grading, packing, and handling fruits and vegetables. Specialists provided assistance of this type to several peach and apple marketing organizations. These organizations also were provided assistance in selecting proper grading and packing equipment, planning layouts, and training workers in grading procedures.

The work of the specialists at the tomato markets was instrumental in moving the tomato crop at prices to growers about $1 per field box above the preceding 5-year average, despite the most unfavorable harvesting conditions in the history of the Georgia tomato industry.

To acquaint consumers with the wide variety of fruits and vegetables produced in the State, the Georgia department, in cooperation with the Extension Service and a large department store, sponsored a Harvest Curb Market in Atlanta. Farmers from every section of the State participated in this 1-day event.

Improving quality and expanding outlets for eggs (GA-A-4)

Under this project, proper methods of grading, candling, packaging, and handling eggs were demonstrated to some 1,800 producers, egg assemblers, wholesalers, and retailers. Through the cooperation of food editors and radio and television stations, the Georgia department informed consumers of the availability of high-quality eggs and suggested various uses which would increase egg consumption.

Providing new basic data and marketing information (GA-D-1 and GA-D-2)

Basic data on all the major crop and livestock enterprises in Georgia were assembled and published under the title, "Georgia Agricultural Facts, 1900-1956." County agricultural data were published for two counties--Calquitt and Cherokee. So far, these county bulletins have been published for 68 of Georgia's 159 counties.

Marketing information for various commodities was assembled and published in the weekly Market Bulletin of the Georgia Department of Agriculture. This publication goes to about 180,000 Georgia farm families.

## HAWAII

Developing new and revised standards for grades of processed fruits and vegetables (HI-A-1)

Under this project, the Hawaii Board of Agriculture and Forestry is developing grades and standards and methods of measuring the various quality factors to facilitate the marketing of processed fruits and vegetables. Work proceeded during the year on standards for such products as purees, nectar bases, nectars, and nectar blends of passion fruit, guava, and papayas. From data collected during the year, it is indicated that much more quality control should be employed by the processors to achieve a more uniform pack. Two plants are practically without quality control, and three have fairly good control, but in these and others there is much room for improvement. The Processed Foods Laboratory at the University of Hawaii, the Processed Foods Standardization and Inspection Branch, AMS, Washington, D.C., and the Processed Foods Office in Puerto Rico cooperated. There are some rather large differences between products processed in Hawaii and similar products processed in Puerto Rico. It is expected that these differences will continue to a large extent and that, in general, grades and standards for Hawaiian products will not be suitable for Puerto Rican products, although it appears that similar methods of inspection and tests can be used. Suggestions from Puerto Rico have been helpful in conducting the project.

## ILLINOIS

Improving methods of handling farm products and expanding market outlets (ILL-A-1)

Eggs.--The Illinois Department of Agriculture continued to place major emphasis under this project on the improvement of egg quality and on providing assistance to producers, dealers, and retailers in adopting marketing practices and methods necessary in complying with the Illinois Egg Law. The series of meetings initiated the preceding year to explain the requirements of the law and to demonstrate proper methods of candling and grading eggs was continued. The total number of such meetings held over the State rose to almost 100, with an average attendance of approximately 45 egg dealers and retailers. These meetings formed a part of the overall program of the Illinois department, in cooperation with the Illinois Poultry Industry Council, University of Illinois, and Southern Illinois University, to encourage improvement in the quality and marketing of eggs.

Specialists of the Illinois department also participated in a study of needed amendments to the egg law and assisted in drafting the amendments, which were approved by the legislature and signed into law, effective July 1, 1957. Important amendments were (1) elimination of the requirement that eggs be candled at the point of first purchase from the producer, (2) establishment of the requirement that eggs sold at retail be held at temperatures not to exceed 60° F. from the point of candling and grading to the consumer, (3) establishment of the requirement that grade buyers must buy from producers in accordance with standards prescribed by the Illinois department and use a uniform report in accounting to the producers, and (4) effective July 1, 1959, prohibition of the sale of ungraded eggs at retail.

Strawberries.--In cooperation with the University of Illinois, the Illinois department assisted strawberry growers in the Franklin County area in organizing a cooperative association to market the 1957 crop. Although this area experienced an unusually adverse season, this grower organization was able to realize about 40 cents per 16-quart crate above prevailing prices on the Anne, Ill., market.

Cucumbers and tomatoes.--Continued assistance was provided to several organized groups of cucumber and tomato growers in southern Illinois in improving the grade and uniformity of their packs. This work has enabled the grower members of these groups to obtain premium prices for their products. The net gain last year to the cucumber growers assisted under this project is estimated at $1.50 per bushel on the approximately

25,000 bushels packed. The tomato growers involved are reported to have received a premium of 50 cents per 10-pound basket over any comparable pack on the Chicago market, a gain of about $35,000 for the season.

One reason for the success of these centralized packing organizations is their ability to offer to the trade straight trailerloads of uniformly graded and packed merchandise.

Improving marketing information (ILL-B-1)

Fruits and vegetables. --The cooperative program with the Illinois Fruit Council in furnishing information to buyers concerning the availability of Illinois fruits and vegetables was continued. Informational bulletins regarding the quantities, qualities, and locations of Illinois peaches and apples were distributed to some 5,400 buyers throughout the central States. This service was expected to be helpful to growers in moving the large 1957 apple crop.

Livestock. --The weekly livestock auction report was discontinued during the year because of lack of State funds.

Poultry and eggs. --Information concerning trends in supplies and prices and other developments in poultry and egg marketing was disseminated semiweekly by radio. Reviews of the marketing situation for these commodities were prepared weekly and released through the press.

Expanding outlets for dairy products (ILL-B-2)

This project is being conducted in cooperation with the American Dairy Association of Illinois. Activities during the year have been concentrated on improving the effectiveness of wholesale and retail route salesmen in promoting the sale of dairy products, assisting retail food stores in dairy product promotional programs, staging special dairy festivals and exhibits, and encouraging schools and institutions to use more dairy products.

Assistance also was provided several county dairy organizations and cities in planning and conducting dairy festivals to promote greater use of dairy products. Some of these programs were designed to supplement national dairy-product promotions, and featured such events as special dairy days, dairy princess contests, recipe contests, grocery-store promotions, special displays, and dairy bars in the public square. In 1 promotion involving 12 retail stores, the marketing specialist utilized a "shelf talker" to suggest food items which combined well with cottage cheese.

Improving facilities and packing and handling methods (ILL-C-1)

The Little Egypt Vegetable Cooperative was assisted in improving cucumber packing operations by installation of a new grading machine with a 2,000-bushel daily capacity, and by changes in the packing line and work methods which resulted in more efficient use of labor.

Similar assistance was provided to the Cobden Tomato Cooperative. The success of this organization had led to a rapid expansion in membership, creating a need for larger and more modern facilities. Specialists of the Illinois department helped in the design of new facilities, in the selection of new equipment, and in planning the equipment layout. The tomato-grading machine installed has a capacity of 1,500 baskets (10 pounds each) per hour. In designing the facilities, space was provided for expansion of the packing area to include lines for cucumbers and peppers. The labor cost of packing tomatoes in this new facility was about .016 cents per 10-pound basket, which is regarded as being below labor costs in small-scale packing operations with hired labor at the farm.

Providing new basic data (ILL-D-1)

The objective of this project is to provide new and more detailed and timely information on prospective production and marketings of agricultural commodities. Under it, Illinois farmers receive data they need in making production and marketing decisions.

Field crops.--Demand is increasing for a varietal breakdown of the acreage of various crops planted or seeded each year. Different varieties of a crop have different physical or chemical properties which affect suitability for certain uses and which influence price. Data on the percentage of acreage planted or seeded to different varieties in each of the State's crop reporting districts were issued during the year for such crops as alfalfa, soybeans, wheat, and oats. Other important information requested and being provided for field crops concerns prospective production and supplies by districts, and weekly data on the development of growing crops and progress of the harvest.

Livestock and poultry.--The quarterly surveys on sow farrowings, calf births, and, during the lambing season, lamb births were continued. The data from these surveys were utilized in making monthly estimates of prospective marketings of these classes of livestock. Reports were issued showing estimates of intended marketings of hogs and cattle by classes and sex. Work was begun to develop annual reports, by counties, on numbers of laying hens and on egg production.

Fruit.--The annual survey of apple and peach tree numbers was made, and the results were published to assist fruit growers and others in keeping abreast of trends in tree plantings and removals. The survey was modified last year to segregate spring and fall plantings, so as to provide a more precise base upon which to project production estimates. A card file of every commercial orchard in the State was started.

Timber.--The semiannual timber products report was continued. Indications are that this service has helped to reduce the wide disparities which formerly existed in values of timber for different uses and in prices for the same product in various areas of the State. Assistance was given to several other States interested in developing a report of this kind.

## INDIANA

Demonstrating uniform grading procedures and improving quality (dairy products) (IND-A-1)

Purdue University continued the jointly financed project with the Indiana Dairy Products Association, Inc., on improving and maintaining the quality of milk and other dairy products. Under this program, specialists conducted dairy plant surveys to check the quality of milk received and products being manufactured and to determine what factors are responsible for quality losses in each plant. The information obtained in these surveys is used as a basis for recommendations to individual plant managers of corrective actions needed, and as material for use at district meetings where plant sanitation, proper equipment, grading procedures, and the like are discussed. In this program, specialists also hold grading schools and clinics to assist plant personnel in improving quality control work. During the year, project specialists checked the milk-grading and cream-grading procedures and reviewed the grading records of 69 milk plants and 26 butter plants which handle approximately 65 percent of the milk and 85 percent of the churning cream purchased from Indiana farms. Marketing specialists working on this project made 224 calls at creameries in checking the accuracy of milk and cream grading. Summarization reports were prepared by the project specialists on the quality tests made at each plant the preceding month, and these results were discussed with plant managers, fieldmen, milk sanitarians, and other plant employees at the area meetings. During the year, 16 district milk meetings and 18 district cream meetings were held throughout the State. The chief value of these meetings is the training which fieldmen receive in methods of improving the quality of milk and cream at the farm. Field surveys

were utilized partly to verify the accuracy of the reports on quality tests and adherence to grade standards which the participating plants are required to submit to project supervisors. Marketing specialists also held many consultations with plant managers and graders on solutions for particular quality problems.

To implement the work done in the field in training plant personnel in methods of improving milk and cream quality, specialists held a series of 8 schools for milk graders and 11 for cream graders, attended by over 800 plant managers, fieldmen, haulers, milk sanitarians, and county agents. These schools were held in cooperation with the dairy division of the State board of health.

Statewide conferences were held at Purdue during the year for fieldmen, plant operators, haulers, and producers, for discussion of methods of improving quality, increasing plant efficiency, and solving problems of bulk milk handling. Clinics for producers of such foods as ice cream, cottage cheese, and market milk were held in connection with these conferences. Participating plants were permitted to submit samples, which were analyzed for composition and bacteria content and scored for flavor, body, texture, and color. A written report was furnished each plant submitting a sample, pointing out any defects in quality and giving instructions for their correction. Clinics of this type also were held periodically in various districts of the State.

The work done under this project has been a major factor in reducing the amount of milk rejected by Indiana dairy plants cooperating in the program. In 1956, the quantity of milk rejected by the cooperating dairy plants was 3,444,245 pounds, compared with 4,813,176 pounds rejected in 1955.

Developing an orderly pattern of marketing farm products (IND-B-1)

Work under this project was continued during the year, with emphasis on expanding market outlets for poultry, dairy products, eggs, watermelons, and tomato juice. The major activities under this program are conducted in cooperation with the Farmer-Retailer Committee composed of producers, representatives of the food industry, Purdue University staff members, and other Indiana leaders in the marketing field.

The chief objectives of this project are (1) to establish an orderly distribution system for Indiana agricultural products, (2) to develop effective methods for dissemination of marketing information, (3) to encourage the production and marketing of quality products, and (4) to encourage the consumption of farm products through promotional programs.

Activities conducted under this project included the holding of the first Purdue Marketing Clinic for management personnel during February 1957, which had as its theme, "Expanding Markets for Agricultural Products." Purdue marketing specialists were assisted in planning and conducting this clinic by the Farmer-Retailer Steering Committee. Among the approximately 400 people attending the clinic were management personnel from meat-packing plants, livestock markets, grain elevators, dairy plants, and poultry processing plants.

During the year, assistance was given in developing promotional programs to expedite the marketing of tomato juice, canned corn, and cottage cheese, which were in plentiful supply. In the tomato juice campaign, letters were sent to distributors informing them of the supply situation for tomato juice and requesting their help on the promotional campaign. Information pertaining to this promotional campaign was furnished 78 home demonstration agents, 2 consumer agents, and radio, newspaper, and television specialists. In addition, letters were sent to 1,700 restaurant operators suggesting why and how they might feature tomato juice and furnishing them with detailed information on the promotional campaign. Information on the tomato program also was included in the "Purdue Retailer," a bulletin sent periodically to 1,200 retailers. Radio tapes and news stories were prepared and given Statewide distribution through the Purdue Information Service. Two articles, "The Season Is the Reason" and "Buy a Cool Glass of

Juice," which emphasized the convenience and health value of tomato juice, were prepared and distributed to 12 radio stations, 178 home demonstration agents, and 50 newspapers. The promotional campaigns for canned corn and cottage cheese were conducted along the same lines as the tomato juice campaign.

While the results of the promotional campaigns are difficult to measure, the Farmer-Retailer Committee is of the opinion that this program has been helpful in moving plentiful commodities and in improving the marketing of Indiana agricultural products.

Other activities under this project included regular issuance of food marketing information for consumers. In connection with this program, marketing specialists prepared 19 radio tapes and news articles on food marketing subjects, which were released to 15 radio and television stations, 47 newspapers, 77 home demonstration agents, and 1 consumer agent.

Other activities included holding four experimental consumer meetings at Anderson, Ind., attended by female labor union members, at which the following subjects were discussed: (1) Learning about meat, (2) wise buying of fruits and vegetables, (3) streamlining your cooking, and (4) stretching your food dollar.

Legislation providing for an Indiana Seal of Quality program was enacted by the 1957 legislature. Under this legislation, packers, distributors, and other marketers may use the seal separately or as part of a private label on any product meeting the requirements. Watermelon growers were the first commodity group to use the Indiana Seal of Quality. At the Indiana watermelon festival held at Vincennes on August 1, 1957, Lieutenant Governor C. E. Parker presented the inspection certificate to the buyer of the first load of watermelons using the Indiana Seal of Quality. Twelve carloads of watermelons identified by the seal were sold at premium prices during the 1957 marketing season. A short crop, high prices and difficulty in obtaining inspection limited the adoption and extensive use of this program for watermelons during the season.

Commodity committees representing broilers, meats, and horticultural crops are exploring the possibilities of using the Indiana Seal of Quality for their products. Its use for eggs is under consideration by members of the State Poultry Association.

Improving product quality and the efficiency of vegetable canning plants (IND-C-1)

Canners of such seasonal crops as tomatoes, corn, peas, and pumpkins were assisted during the year in improving the quality of their products through technical training of their employees in such quality control techniques as the Howard mold count method, insect fragment detection, fly egg detection, and grading products according to USDA standards. Training in these procedures was given about 80 plant technicians from 41 plants at the 1956-57 Indiana Canners' Technicians School. These technicians were given additional training on the job by specialists assigned to the plants. Specialists also assisted plant operators in adopting proper sanitation measures and in determining compliance with the Indiana Canners' Sanitary Code. Technical information on new developments in canning was furnished canners through a monthly newsletter. Canners also were given information on the canning quality of new tomato varieties, based on fruit size and standard tests for color, solids, and acid.

Specialists made surveys of several plants to determine what changes were needed in equipment, plant layout, and processing methods to improve efficiency. The specialists then assisted plant management in adopting recommended improvements.

Providing special market information and improving marketing efficiency (IND-D-1)

Under this project, market information programs, coordinated with work of the departments and agencies of Purdue University, were conducted to assist farmers on marketing problems. Radio tapes and news articles were prepared regularly by the project specialist for release to radio stations requesting the service and to 500 newspaper

outlets. Market reviews analyzing the marketing situation for Indiana agricultural products were prepared for use by radio stations. These releases keep Indiana farmers informed on market trends. In addition, market outlook information was prepared for publication in "Economic and Marketing Information for Indiana Farmers," a publication distributed to about 20,000 Indiana farmers. A popular feature of this publication is the series of articles on the short-term marketing outlook for agricultural commodities important to Indiana farmers.

Another service furnished in connection with the market information program was the preparation of indexes of Indiana farm-product prices, released monthly to about 300 Indiana farmers, businessmen, and staff members of Purdue University. A monthly news release on current changes in the Indiana farm price situation also was prepared by the project specialist and released to Indiana newspapers and radio stations.

Data comparing the current broiler feed ratio with ratios in past periods were prepared and published in the semiweekly poultry and egg market report.

Grain.--The program providing assistance to farmers and marketing agencies on grain marketing problems was continued. Major activities conducted were (1) dissemination of market information to assist producers in making marketing decisions, and (2) provision of guidance and firsthand assistance to operators of grain elevators and feed mills in improving operating efficiency.

Meetings were held throughout the State, tapes were furnished for 19 radio stations, and news articles were prepared for 418 news outlets to make timely information available to grain producers making marketing decisions. The articles prepared by the project marketing specialist on the wheat and the soybean market situations were published in "Economic and Marketing Information for Indiana Farmers."

The grain information program is reported to have contributed to the orderly marketing of Indiana grain crops and to have been a factor in obtaining additional returns for many Indiana grain producers.

During the year, 2 county and 3 district meetings were held to discuss methods of improving feed grinding and feed mixing. These meetings were attended by 305 managers of grain elevators and feed mills. A marketing clinic was held for managers of grain marketing firms to analyze problems of expanding market outlets and of increasing efficiency of plant operations. This clinic was attended by managers of 76 grain elevators and feed mills.

A market tour of grain facilities in Chicago was arranged for 165 persons from 9 counties in Indiana. The purpose of this trip was to study problems of grain procurement, to obtain up-to-date information on grain marketing, and to observe the operation of feed mills as a basis for improving facilities and grain-handling methods. Included in this service work was assistance to one elevator operator on all phases of building and equipping a new elevator to replace one destroyed by fire. Many of the recommendations on construction of the new facility were based on findings in Purdue and USDA research studies. While the capacity of the new elevator was 3 times as large as that of the old facility, the labor force was reduced by 1 man. It is estimated that this more efficient new grain facility will save several thousand dollars annually.

Assistance was provided under this project in construction of several new grain bins used to store Commodity Credit Corporation grain. Eight of these bins have a total storage capacity of 400,000 bushels.

The information presented by the project leaders to feed mill managers has brought about increased use of bulk feed trucks. About 30 additional bulk feed trucks were used in Indiana last year. Bulk feed delivery has resulted in substantial savings in labor costs for farmers and feed handlers.

Frozen food locker plants. --During the year, operators of 306 frozen food locker plants in Indiana were assisted in improving the operating efficiency of their plants. The emphasis in this program was on increasing the volume of business and on reducing labor costs. A State meeting, 6 district meetings, and a marketing clinic were held to discuss problems of efficient operation of locker plants. Individual assistance on utilization of labor and operation of equipment was provided to locker plant managers by the project marketing specialist.

As a result of the work, it is reported that there was a considerable increase in volume of business and a reduction of labor costs. During the last 5 years, the total volume of processed food per plant has increased from 102,000 pounds to 162,000 pounds, without corresponding increases in labor costs. The increased business in many locker plants resulted from manufacture of additional products and expansion of market outlets for meat products sold to restaurants, drive-ins, institutional eating places, hotels, and school lunch rooms. The reduction of labor costs resulted from elimination of idle and down time, improvement in handling methods, and rearrangement of plant layout.

Livestock. --During the year, five feeder cattle demonstrations were held, in cooperation with the Purdue Animal Husbandry Department, to assist feeders in recognizing the different grades and selecting feeders best suited for particular feeding programs. Approximately 920 persons attended the demonstrations. Many cattlemen have requested that this program be continued. In addition, 15 feedlot tours were held to observe feeding methods and to obtain information on market conditions for feeder and slaughter cattle. Three regular reports on the beef cattle market situation were issued immediately following release of the cattle-on-feed reports by the Indiana Crop and Livestock Reporting Service. At the request of county agents, meetings were held in the spring and early fall to inform feeders of the cattle marketing situation.

The program encouraging the marketing of the meat-type hog included several live hog and carcass demonstrations in the leading hog-producing counties of the State. Feedlot tours, visits to hog-processing facilities in Indianapolis and Chicago, and newspaper and radio releases were used to promote the marketing of meat-type hogs. Six meetings sponsored by the Indiana Producers Marketing Association were held in different parts of the State to discuss changes in livestock marketing practices.

Fruits and vegetables. --The principal type of assistance given in the marketing of Indiana horticultural crops was the release of the "Produce Supply Report" weekly during the growing season. This report contained marketing information on acreage and production of crops, on time of harvest, available supplies by varieties, etc., for watermelons, apples, peaches, tomatoes, sweet corn, and other Indiana fruits and vegetables. Each of the weekly releases was sent to about 625 potential buyers of fruits and vegetables. In addition, consumer releases were sent to 26 daily newspapers and 80 radio stations to inform consumers of "best buys" in processed and fresh fruits and vegetables. It is estimated that the information service provided under this program during the last season assisted producers in obtaining increases in net returns of from 1/4 to 1 cent per pound for watermelons.

Providing new market information (IND-D-2)

Quarterly releases on sow farrowings were issued as of March 1 and September 1 to supplement the regular reports of June 1 and December 1. These reports are designed to provide producers with timely information to enable them to adjust their hog production so as to bring about orderly marketing of hogs.

Developing an experimental market news program (hogs) (IND-D-3)

During the last year, the experimental price reporting program covering interior markets was expanded from 61 to 66 local markets in 35 counties of the State. About 3 million hogs move through these markets annually. Price information on the various grades of hogs was assembled from the local market points and disseminated by radio,

press, and mailed bulletins. For example, releases made to the United Press Wire Service were carried by 37 newspapers in 34 Indiana cities, and used by 25 Indiana radio stations in their farm programs.

The price and receipt data obtained from this program are being analyzed to determine the patterns of receipts and price relationships between the interior markets and the Indianapolis terminal market.

## IOWA

### Providing new market information (IOWA-D-1)

Livestock. --The Iowa Department of Agriculture continued its program to provide livestock producers and marketing agencies with new and more timely information concerning prospective marketings, to help them plan their marketing and processing operations more intelligently.

Iowa was the pioneer State in developing the quarterly (September 1 and March 1) surveys of sow farrowings to supplement the "old" June 1 and December 1 rural carrier surveys. Nine other States--Indiana, Illinois, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin--now issue quarterly sow-farrowing reports under this program. These reports are consolidated into a regional report through the Crop Reporting Service Livestock Board. They represent more than 70 percent of national hog production. These quarterly reports cover farrowings during the quarter and estimates of intended farrowings in the following 3-month and 6-month periods.

The Iowa department continued work to improve the quarterly reports by revising the December and June 1 questionnaires so that the data for all quarters of the year would be more comparable. Further refinements in the information on prospective hog marketings are being provided by the Iowa department through monthly estimates of sow farrowings and forecasts of hog marketings 1 to 2 months ahead.

Basic data from the annual farm census and rural carrier surveys on the inventories of hogs and cattle by counties were released. This information is useful to many public and private agencies concerned with livestock marketing problems.

Dairy products. --Work was continued in preparing comprehensive basic data, soon to be published, on the dairy industry in Iowa.

Corn. --A publication was issued during the year giving background information on the Iowa corn crop and including information on average yields down to the township level. Data on this crop at the local level have been much in demand by farm planning, teaching, credit, and marketing agencies.

## KANSAS

### Improving the quality of dairy products (KAN-A-1)

The Kansas State Board of Agriculture continued its comprehensive program of assisting producers, cream stations, and dairy processing plants in improving the quality of cream for manufacture into butter. Activities under the project, which are being conducted in cooperation with Kansas State College and the Agricultural Marketing Service, USDA, have brought about further improvement in cream quality, with the result that several butter manufacturers have adopted grade labeling of their product. Heretofore, grade labeling has been resisted by manufactures in Kansas because of the variable quality of the cream supply, particularly from season to season.

Improving marketing methods and expanding outlets (KAN-B-1)

Eggs. --The objectives of the Kansas egg marketing improvement program are the development of more graded-egg buying stations, establishment of a uniform basis of buying and selling, increased use of grade standards in retailing eggs, development of additional outlets for eggs, and increased efficiency in the physical handling of eggs.

Considerable emphasis has been placed on developing a better understanding among producers, dealers, and retailers as to what constitutes egg quality. Specialists participated in 11 demonstrational meetings during the year, at which proper methods of candling, grading, and handling eggs were explained to about 3,500 persons.

Progress under this program is being reflected in increases in the number of egg handlers under Federal-State supervision and in the number of producers grading their own product. Eighteen plants have adopted Federal-State grading services since the program began in the State in 1952, and official grading of eggs has increased to nearly 14,000,000 dozens annually. When the program started, few producers graded their eggs. Now about 600 producers market graded eggs.

The egg quality improvement program is being reflected in better quality raw material for egg-breaking plants in the State. Plants report that the improvement in breaking stock has enabled them to increase their paying prices by 1/2 cent to 1 cent per dozen over the previous year.

The Kansas State Board of Agriculture continued to assist egg packing and breaking plants in improving operating efficiency. In one operation, where assistance was provided in building a new plant, costs of handling eggs were reduced by about 50 percent.

Eggs, poultry, milk, dairy products, and meat. --Specialists of the Kansas State Board continued to participate in programs to promote increased consumption of these products. The programs, conducted in cooperation with State and national producer organizations, included demonstrations before various groups and on television of methods of preparing the products and using them in varying the menu. The activities were timed to coincide with periods of plentiful supply. Assistance also was given in locating outlets for the products in other States.

Vegetables. --Work was continued in the southwest Kansas vegetable area to develop greater uniformity in the grade and pack of cantaloups and onions.

Furnishing new market information and basic data (KAN-D-1)

Grain. --Through the 1957 wheat quality survey, wheat growers, grain dealers, and millers were kept informed of the protein content and test weight of the wheat crop by counties as the crop moved to market. During the main marketing period in 1957, from about June 17 to July 31, data on the quality of wheat being shipped from different points in the State were assembled from the records of the Kansas and Missouri Grain Inspection Departments, and, after analysis and summarization, were released each Tuesday and Friday morning to the wire services. At the end of the marketing season, a final summary of the data was released. This summary included comparative data for previous years.

A survey of sorghum varieties was conducted in 1957 to obtain information helpful in marketing the crop and in interpreting the influence of hybrid varieties on yield.

Improving marketing methods and expanding outlets (KY-B-1)

Eggs.--Specialists of the Kentucky Department of Agriculture continued to work with producers and dealers in improving egg quality and methods of handling and displaying eggs. Producer organizations were assisted in developing market outlets for eggs through local retail stores.

Fruits, vegetables and berries.--The Kentucky department aided a number of new fruit and vegetable associations in planning facilities, selecting equipment, deciding on the grades to pack and the packages to use, training personnel in proper methods of preparing products for market, and securing outlets. Marketing specialists conducted, for example, 25 meetings over the State at which strawberry picking, grading, and packing demonstrations were given to some 2,000 producers. At harvest time, the specialists were stationed at the receiving platforms to show growers what improvements they needed to make in the pack to realize maximum returns. Specialists also were assigned to follow the berries through to terminal markets and report back to the shipping associations the condition in which the berries arrived and what improvements, if any, were needed in handling and shipping to insure arrival in good condition. One association reported that, as a result of this followup work, it was able to realize at least $5,000 more for the berries shipped than would have been the case otherwise.

Dairy products.--The Kentucky department developed an informational program to assist dairy plants in overcoming surplus-deficit problems. It is estimated that 15 million pounds of surplus milk were moved to deficit areas under this program. Specialists of the department helped a number of producers in converting to the bulk tank method of handling milk. Several dairy breed associations were helped in selecting animals for their breed sales.

Promotional work was continued to expand the use of milk vending machines. It was reported that about 1,000 additional units were placed in the State during the year.

Livestock.--Specialists of the Kentucky department were instrumental in initiating a Federal-State grading program for lambs. The program to improve the marketing of feeder calves was greatly expanded through assignment of 5 specialists to assist feeder-calf associations in scheduling sales, selecting the animals to be sold, informing buyers of the sales, and improving methods of conducting the sales. The Kentucky department also participated in a promotional program to increase consumption of spring lambs. Other activities under this project included assistance to livestock auction market operators in designing new facilities, and continuation of the campaign to reduce injury to animals during the marketing process.

Grain.--Two elevators in the State were assisted in establishing grain-grading programs. Work was initiated to improve facilities and methods of storing, drying, and fumigating grain and to eliminate rodent and insect contamination.

Providing basic agricultural data (KY-D-1)

The Kentucky Crop and Livestock Reporting Service initiated a survey of beef cattle numbers, ages, breeds, and marketing patterns to meet the demand for better information about the beef cattle industry of the State. Response to the survey was exceptionally good, and at the end of the year the data were being summarized for publication.

Improving quality and expanding market outlets (LA-A-1)

Vegetables.--Assistance was provided to vegetable growers in northeastern Louisiana in adopting proper methods of grading and packing and in finding outlets for expanded production of such commodities as bush beans, okra, peas, tomatoes, and sweetpotatoes. For example, specialists were instrumental in getting a tomato packer to locate a packing shed in West Carrol Parish to market "pink" tomatoes from a pilot production operation designed to test the feasibility of developing this crop as an important source of farm income in the area. Success in marketing this pilot production is expected to lead to a rapid expansion in acreage.

Strawberries.--Marketing specialists of the Louisiana Department of Agriculture and Immigration participated in a comprehensive program, involving the Extension Service, Agricultural Experiment Station, U.S. Department of Agriculture, and Louisiana Strawberry Commission, to improve the quality of berries reaching the terminal markets.

Dairy products.--During the year, specialists assisted the dairy industry in finding outlets for surplus milk through dissemination of information on the current demand and supply situation for milk in various areas of the State. These reports were mailed each month to 5,500 producers and plant operators, and helped in maintaining the demand-and-supply balance for milk between deficit and surplus areas of the State. For example, during the year about 17 million pounds of milk was moved among handlers to correct imbalances of supplies and needs for fluid milk and cream. As a result of these transfers of milk to higher priced use classifications, dairy producers in the State received an additional income of about $250,000. The current information on milk marketing conditions enabled marketing specialists to assist distributors in averting a critical shortage of milk in the area damaged by "Hurricane Audrey."

Improving marketing methods and expanding outlets (poultry and eggs) (LA-A-2)

The program of demonstrating the most up-to-date developments in handling, processing, merchandising, and retailing techniques for poultry and eggs was continued. Use of official grades was promoted through the voluntary "Grade Label Program" in the marketing of Louisiana poultry and eggs. The 6 egg-grading plants cooperating in this program increased their volume by an average of about 25 percent over the preceding year. Similar gains in volume of product marketed were experienced by the 4 cooperating poultry plants. Nearly 1,300 visits were made to retail stores and wholesale establishments within the State to explain the poultry and egg quality program.

Specialists also assisted several poultry and egg plants in improving plant facilities, equipment layouts, and work methods.

Disseminating special market information (general agricultural products) (LA-B-1)

The Louisiana department continued its monthly "Agricultural Availability Report," which provided information on the volume of products for sale in 33 different parishes. These reports were furnished to a selected list of wholesalers, truckers, and other buyers in Louisiana and nearby States. Through the facilities of the truck-weighing stations, copies were given also to truckers coming into the State.

Improving the packaging, handling, and transportation of farm products (LA-C-1)

In cooperation with Louisiana State University, the Louisiana department conducted tests of several new shipping containers for strawberries. These tests demonstrated that two of the containers had certain advantages over the standard wirebound display case and, with modifications, would be acceptable to the trade. Colored slides of the containers tested were made upon arrival of the test car at the Chicago market. These were used in presenting the results of the tests to growers and shippers. Marketing tests of the modified containers are to be made next season.

Specialists of the Louisiana department also cooperated with the Agricultural Marketing Service, USDA, on methods of improving the precooling and refrigeration of both truck and rail shipments of strawberries. Arrangements also were made for one shipment of berries by air to eastern markets. Indications are that the volume shipped by this method will increase.

The Louisiana department again sponsored a meeting of transportation agencies, growers, and shippers in advance of the marketing season to discuss plans for shipping the strawberry crop. Agreement was reached at this meeting on a number of points concerning needed improvements in transportation.

Louisiana department specialists presented evidence in opposition to proposed rate increases on agricultural products and farm supplies, at rate hearings before the Interstate Commerce Commission and the Louisiana Public Service Commission.

Improving cotton fiber quality (LA-C-2)

Most of the 338 cotton gins in Louisiana were helped during the year in selecting and installing new and improved equipment and in making adjustments in ginning to increase efficiency and reduce "rough prep" cotton. Results of this work in reducing "rough prep" are borne out by the fact that last year the percentage of cotton in this category was only 0.2 percent, compared with an average of 12.6 percent during the 10-year period before initiation of this program in 1951.

Disseminating special market information (timber products) (LA-D-1)

Information was compiled by areas on prices paid producers and dealers for timber products at the levels of stumpage, f.o.b. car, and f.o.b. mill. This information was released in a quarterly report and also disseminated through radio and press releases. The importance of this project is indicated by the fact that more than 50 percent of the land area of Louisiana is in commercial forests, and that there are approximately 100,000 small owners of this timberland. The timber reports released under this project have been useful in providing producers and buyers with a more equitable basis for determining prices and values for timber at the stumpage and delivered-mill levels. As a result of these reports, the wide range in prices paid producers for stumpage timber has been reduced, and this service has created additional interest in improving the quality of timber products.

## MAINE

Improving marketing methods and expanding market outlets (USDA-ME-B-1)

Potatoes.--The Maine Department of Agriculture continued to cooperate with the Maine Potato Commission on a promotion program which emphasized the State of Maine blue, white, and red trade-mark. During the year, marketing specialists visited 124 cities and towns in 27 States and the District of Columbia to explain the Maine quality program to wholesalers, retailers, and consumers, and to encourage the purchase of potatoes packed under the State of Maine brand. Upon request, assistance was given wholesale and retail organizations in designing and arranging displays and improving merchandising practices. The marketing specialists arrived in the terminal markets at the beginning of the marketing season to formulate plans for the Maine promotional program. While in the markets, the specialists observed the condition of shipments upon receipt in the terminals, investigated any complaints of dissatisfied buyers, and explained the promotional program to food editors and other interested persons.

The Maine Potato Commission was assisted in designing and constructing potato exhibits for use at fairs, shows, and conventions. This program was recognized by the Maine Potato Commission and Maine Potato Council as having played a vital role in the coordinated efforts of the industry to market the 1956-57 potato crop.

In cooperation with the Maine Potato Council, the Extension Service, the Potato Handling and Research Center, and the U. S. Department of Agriculture, work was continued on improvement of shipping-point handling and packaging facilities. Marketing specialists kept shippers informed on packaging and grading problems as they appeared in the terminal markets. Most of the shippers who received the information on packaging problems were reported to have taken immediate action in making needed corrections. In some instances, equipment modifications were made by the manufacturers of potato handling and packaging equipment to eliminate the causes of problems observed by marketing specialists in terminal markets. Work was done also on efficiency in use of labor and in warehouse management.

The Maine department again cooperated with the Maine Potato Commission in the demonstrational program to promote distribution of sized and washed potatoes in consumer packs. During the 1956-57 marketing season, Maine shippers washed 3,909,562 hundredweight, or 23 percent of the entire table stock shipments. This is an increase of 7 percent over the previous season.

During the year, marketing specialists worked with potato processors on a program to broaden and develop new market outlets for processed potatoes sold as potato chips, French fries, and potato flakes. Particular emphasis was placed on the promotion of quick-frozen processed potatoes sold to the institutional trade. Marketing specialists visited all the potato processing plants in Maine to observe operations and discuss marketing problems with plant managers and other key personnel.

The department engaged in various other activities under this program, such as the writing of a monthly column for the "Potato Councillor," entitled "Reports from Men in the Field." The department again cooperated with the Maine Potato Commission in drawing up and presenting its promotional program at the annual merchandising and management conference of the United Fresh Fruit and Vegetable Association.

Marketing specialists also appeared on radio and TV programs, and spoke before civic groups, agricultural organizations, and educational seminars, dicussing the Maine potato promotional program. Information on the program was furnished 8 other States and one Canadian province.

Poultry and eggs.--Under the long-range egg-marketing program, demonstrations were provided to producers, wholesalers, retailers, and restaurant and hotel operators on proper methods of candling, packaging, handling, and marketing eggs. At egg grading and candling schools held throughout the State, attendance was excellent and the interest was keen. Restaurant and hotel operators were informed of the correct meaning and best uses of each grade and size of eggs, the best time of the year to purchase certain sizes, and the proper care of eggs. As a result of this program, consumers are recognizing the standard of quality of eggs packaged under the blue, white, and red State brand and are paying a premium for eggs of high quality. Many large retailers are purchasing eggs twice weekly and are using adequate refrigeration facilities to maintain the quality of the eggs. Another indication of progress made under this program is that many additional producers were licensed during the year to package eggs under the State trade-mark.

Schools were conducted again for wholesalers, retailers, restaurant and hotel operators, and poultrymen, teaching proper methods of buying, handling, cutting, packaging, displaying, pricing, and merchandising, and proper care of various types and cuts of poultry and turkey.

The five largest poultry processing plants in the State now are featuring poultry parts or packaged cut-up poultry. A large part of the demand for poultry parts is from retailers who have attended the poultry cutting and merchandising schools.

It was reported that the displaying of poultry parts and packaged poultry in retail outlets has substantially increased the sale of poultry throughout the State. Four of the 8 major poultry processing plants in Maine now are licensed to use the State trade-mark

on ready-to-cook poultry products. The cutting and packaging demonstrations on television and radio programs have familiarized more consumers with ready-to-cook poultry products, and have increased demand for these products. Many large retail organizations now are featuring State-of-Maine labeled poultry products.

During the year, 27 chicken barbecues by organizations were held, at which department specialists assisted in the technique of barbecuing. In addition, a department marketing specialist appeared on two television programs to demonstrate backyard barbecuing. Equipment was loaned to some groups, and a bulletin containing instructions and recipes was distributed. This program endeavors to encourage organizational groups to put on chicken barbecues without outside assistance. It also is hoped that the organization-type barbecue will stimulate those in attendance to barbecue chicken for the family on backyard grills.

The department received many letters of appreciation for its assistance, indicating that it was doing an effective job of expanding consumption of poultry products. The department again cooperated with the Maine Poultry Improvement Association in sponsoring the Maine Broiler Festival. At the festival, marketing specialists presented egg-candling, poultry-cutting, and backyard barbecuing demonstrations in a large tent, appropriately named the "Egg-to-Eating Tent." Different ways of cooking chickens were demonstrated on kitchen equipment set up at one end of the tent. Approximately 15,000 persons viewed the demonstrations and consumed 10 tons of Maine chickens.

In cooperation with the Maine Poultry Associates, an intensive poultry promotional campaign was conducted for 9 weeks in the greater Boston marketing area. The blue, white, and red State of Maine labels were emphasized as the symbol of quality during this campaign. Two department marketing specialists conducted market service work with wholesalers and retailers, and appeared on television programs in connection with the Maine poultry promotion.

In cooperation with two IGA stores in Burlington and Salem, Mass., chicken barbecues were held in parking lots adjacent to the stores to promote Maine trade-marked poultry. As a result, sales of ready-to-cook poultry under the Maine trade-mark in one of these IGA stores increased by 11 percent during the 3 days that the chicken barbecues were held. Several Maine processing plants are planning to build barbecue equipment and put on chicken barbecues similar to those organized by the State department.

Marketing specialists also appeared on the Rex Trailer Boomtown Show, a 3-hour cowboy program on WBZ-TV, Boston, Mass. During the program, the specialist talked about Maine broilers and demonstrated barbecuing before the cameras. The value of the free time given for the barbecue demonstration on this television program was estimated at $1,200.

A color movie entitled "Maine Barbecue" was filmed in a typical Maine lakeshore setting to demonstrate correct barbecuing of chicken. This movie is being shown in leading theaters in areas where Maine poultry is marketed. The demand by theater managers for use of the film exceeds 600 requests, which is about 3 times the bookings originally anticipated.

The New England Crop Reporting Service was aided again in collecting information for its weekly report showing the number of eggs set in Maine commercial hatcheries, the number of chicks hatched, and the number of broiler chicks placed in Maine, Connecticut, Massachusetts, New Hampshire, Maryland, Virginia, Georgia, and countries in South America. In addition, the department, in cooperation with the Maine Poultry Improvement Association, the Maine Agricultural Experiment Station, the Extension Service, the Maine Restaurant Association, the Maine Hotel Association, and wholesale and retail stores conducted a program to promote and improve the distribution and merchandising of Maine poultry and poultry products.

Milk. --Department marketing specialists, in cooperation with the Maine Dairy Council and the Maine Milk Tax Committee, conducted a program to promote the sale and consumption of fluid milk and to develop a better public understanding of the National School Lunch Program and Special Milk Program. The specialists set up exhibits to promote the consumption of milk at all the county and State teacher conventions. In addition, all the school superintendents and principals were contacted and encouraged to join the Special Milk Program or expand it in their schools.

In the last year, 737 of an estimated 1,300 public schools in Maine participated in the Special Milk Program or the School Lunch Program. This is an increase of 59 schools over the previous year. A report released by the Maine Department of Education indicates that 8,325,346 half-pints of milk were served with lunches during the last school year. The amount of milk consumed in the Special Milk and School Lunch Programs represents gross income of about $900,000 to the Maine milk industry.

Marketing specialists also contacted the directors of all the summer camps eligible to participate in the Special Milk Program. As a result, 40 of a possible 50 eligible camps participated in the program, compared to a single camp in 1956.

Marketing specialists helped in planning and directing several milk promotional programs, such as the Maine Dairy Day Parade. Department staff members also assisted in the distribution of over 700,000 pieces of June Dairy Month materials, including auto bumper strips, ADA store posters, place mats, banners, etc. This material was supplied and paid for by the Maine Milk Committee. Specialists furnished material for publication, and appeared on radio and television programs in connection with June Dairy Month.

Marketing specialists also participated in 232 meetings with civic, educational, and professional groups, with about 7,000 persons attending. Project specialists assisted in the distribution of 177,484 pieces of Dairy Council material. Cooperating with the Maine Department of Agriculture on this program were the Maine Farm Bureau, Maine Extension Service, Maine Dental Association, Maine State Nurses Association, State and local PTA's, State Boy and Girl Scout Councils, State Home Economics Association, State Department of Health, State Nutrition Committee, and Maine Dairy Council.

Red meats. --The department, in cooperation with the National Livestock and Meat Board, held four meat-cutting and merchandising schools in various sections of the State for wholesalers, retailers, and hotel operators, to familiarize them with proper methods of buying, cutting, handling, merchandising, and pricing red meat and meat cuts. Each day of the school, marketing specialists appeared on radio and television and described the scope of the program and location of the meeting. It is estimated that at least 190,000 people listened to or viewed these radio and television programs, which were presented on public service time. Approximately 600 housewives and home demonstration agents attended the meat-cutting demonstration held in conjunction with Maine Farm and Home Week at Orono.

The emphasis in the work conducted under this project the last year has been on cutting demonstrations on the "hard-to-sell" forequarter parts. It is reported that, as a result of this program, there has been an increase in the demand for cuts of meat that are normally considered difficult to sell. Success of this program has been attributed largely to the proper cutting and packaging of these cuts of meat.

Apples. --Work was carried on in cooperation with the Maine Agricultural Experiment Station to determine the amount of bruising and puncture damage to McIntosh apples that occurs in transit to market. Three new types of consumer packs were tested. These were a long, narrow polyethylene bag, a short, squat polyethylene bag, and a polyethylene bag containing a cell partition and a backboard insert. The different types of consumer packs were shipped in various positions in specially designed 200- and 275-pound test master cartons. The test shipments indicated that the apples shipped in the cell insert bag had no stem punctures and the least amount of bruises of the three packages

used. Other results indicated were: (1) Nearly all the bruises and stem punctures occurred on the cheeks of the apples, (2) the bottom and top layers in the master containers showed more bruising and stem damage than the center layers, (3) apples in the center of the consumer packages received more bruising than apples in other parts of the packages, and (4) apples shipped in the 275-pound master containers showed less bruising than those shipped in the 200-pound cartons.

During the year, a survey was conducted to determine the number of bushels of apples, by variety, produced in the State. This information will be of great value to wholesalers and growers in planning their marketing programs. The department also assisted the Maine Apple Commission and the Maine State Pomological Society in conducting the National Apple Week and Maine Apples on Parade promotions. During these promotions, department specialists distributed point-of-sale material, appeared on radio and television programs, and did service work at the wholesale and retail levels.

Dry beans. --The service work on dry beans consisted of personal contacts with the trade, and demonstrations and exhibits to promote the sale of Maine dry beans. The marketing specialist provided wholesalers and retailers with information on Maine dry beans and point-of-sale material for store displays. The department exhibit at the 1957 Eastern States Exposition Fair featured Maine baked beans. At this fair, 36,000 persons purchased and ate individual pots of Maine beans and more than 500,000 persons viewed the display of different varieties and packs of Maine beans. As a result of this promotion, a large supermarket chain in Springfield, Mass., stocked its stores with Maine beans packed under the State of Maine blue, white, and red label.

A department marketing specialist accompanied several bean growers and processors on a tour of the Michigan dry bean industry. Modern methods of storing, handling, processing, and packaging were observed.

Price data were obtained by marketing specialists from wholesalers and handlers of dry beans and were published in a weekly market report disseminated throughout the State to growers, handlers, and wholesalers. Work was continued on improvement of bean seed quality.

Maple syrup. --At the request of the Maine Maple Syrup Producers Association, the department again assisted in promoting the marketing of maple syrup under the State of Maine blue, white, and red label. Marketing specialists made guest appearances on television and radio programs, provided information and materials for use by food editors, and, during harvest, furnished articles and pictures to newspapers throughout the State. The 4 television and 5 radio programs on which the marketing specialists made guest appearances to promote Maine maple syrup reached an estimated 125,000 persons. The commercial value of the free time allotted was about $700. As a result of this program, more maple syrup was sold under the State trade-mark in 1957 than in previous years.

Blueberries. --The department assisted in a program to promote consumption of the bumper 1957 crop of Maine blueberries. Marketing specialists made guest appearances on radio and television and furnished recipes and other information used by food editors in their demonstrations and newspaper columns. One hour of free time on television and 27 minutes on radio were devoted to the program. The department exhibit at the Eastern States Exposition Fair featured Maine blueberry pies and blueberry muffins.

## MARYLAND

### Improving handling methods for grain and soybeans (MD-A-1)

In addition to its continuing program of encouraging the use of official grades in buying and selling grain, holding grain-grading schools, and testing moisture meters, the Maryland Department of Markets assisted producers and grain dealers in finding solutions to a number of emergency problems in grain marketing.

One of these problems arose when the principal terminal elevator in the State announced at the beginning of the soybean harvest that permits to store soybeans at this elevator would be denied any dealer consigning cars containing "excessive foreign material." The fact that the management of the elevator would not specify what constituted "excessive" created much confusion and misunderstanding. The Maryland department arranged meetings with the elevator management and dealers to clarify the situation and to carry out a program for reducing the foreign-material content of soybeans marketed. In cooperation with Extension Service specialists, producers and dealers were assisted in improving harvesting and cleaning operations. Specialists also gave dealers advice on proper loading practices, and maintained a close liaison with elevator management to make certain that cars being loaded were eligible for storage permits. As a result of these efforts, foreign material in practically all cars of Maryland soybeans shipped to the Baltimore terminal was held to 2 percent or less.

Another emergency problem in soybean marketing arose because of excessive rain at harvest time. Rumors became widespread that the unfavorable weather had resulted in excessive sprouting and that most beans would be classified as "materially weathered" and subjected to substantial price discounts. By conducting a quality survey of the crop and arranging meetings of producers, dealers, and terminal buyers at which samples of the crop were compared against official standards, the Maryland department was able to establish that the crop was of satisfactory quality. These activities restored confidence and stabilized the market.

The third emergency situation in bean marketing occurred as the result of a strike at the Port of Baltimore. The Maryland department assisted producers and dealers in finding temporary storage space and thus averted indiscriminate price discounting.

The Maryland department also spearheaded a program to locate sources of hay to relieve the shortage in the State caused by summer drought.

Improving procedures for the quality control of vegetables for processing (MD-B-1)

The Maryland department assisted the Agricultural Marketing Service in developing improved procedures for determining the succulence and maturity of lima beans for processing, in developing and testing grade standards for Italian-type tomatoes, and in testing and evaluating different methods for measuring quality in sweet corn.

Improving methods of grading and marketing (livestock and wool) (MD-B-2)

Activities under this project included demonstrating the use that producers can make of official livestock grades, determining when and where to sell, improving market outlets for livestock and wool through special sales and pools, assisting producers in improving methods of preparing wool for market, encouraging the marketing of meat-type hogs, and preventing losses from bruising and rough handling of livestock.

Cattle and calves. --The Maryland department for several years has sponsored special sales of feeder calves and feeder cattle as a means of improving outlets and of demonstrating methods of grading livestock in accordance with official standards. Sales at the annual feeder calf sale in the fall of 1956 amounted to about 1,350 head, and returned producers about $16,000 above what they would have brought through other sales channels.

The 1957 spring feeder cattle sale resulted in increased returns to producers of about $9,000 for the 451 head sold.

Feeder pigs. --As a result of the success of the feeder calf and cattle sales, hog producers in Maryland became interested in a similar program for feeder pigs. The Maryland department assisted in organizing and conducting two feeder pig sales during the year. Sales volume totaled 1,444 head and returned producers an estimated $4 per head above what would have been received through alternative outlets.

Wool. --The Maryland department for several years has sponsored a wool marketing program under which wool is assembled at pickup points and consigned to a cooperative wool marketing organization for sale. As a phase of this program, the department conducts meetings with producers to demonstrate proper methods of preparing the fleece for market and of grading wool, and to point out the proper time to shear. This arrangement for marketing wool, which has resulted in a substantial improvement in prices to growers, was continued during the year. By this method of sale, growers received an advance upon delivery and additional payments as the wool was sold. The Maryland department also organized a pool for those growers who desired immediate sale after the shearing season. Some 156 producers consigned nearly 40,000 pounds of wool to the pool. This wool was sold on a sealed-bid basis and returned producers about 5 cents per pound above prices being offered at the time by local and itinerant buyers.

Improving the quality and merchandising of Maryland canned fruits and vegetables (MD-C-1)

Activities under this project were curtailed because of the loss to private industry of the specialist conducting the work. The specialist did assist the Maryland Department of Horticulture in planning and conducting the Maryland Food Processors' Workshop, attended by about 60 percent of the fruit and vegetable processors in the State. Several articles on methods of improving the efficiency of processing were prepared and published in the canners' magazine, "Canning Trade."

Providing new basic information (MD-D-1)

Apples and peaches. --The results of a tree survey of these fruits were published during the year. This report, based on the first complete enumeration since 1949 of trees in commercial orchards, included information on ages and varieties of trees, production by varieties, sales channels utilized by growers, and types of containers used in marketing the crop. Much interest has been expressed in the report not only by Maryland growers but also by growers in other States who would like similar surveys made.

Poultry and eggs. --As a basis for better planning of production, marketing, and quality programs for eggs, there has been a need in Maryland for more accurate information on numbers of layers and their distribution in the State, size distribution of flocks, seasonality of egg production, and trends in production and marketing practices. To meet these needs, the Maryland Crop and Livestock Reporting Service, in cooperation with the Agricultural Experiment Station and the Extension Service, initiated a survey of the egg-producing industry. The survey is of the segment type, employing minor civil divisions as the primary sampling units. The first phase of the survey consisted of a field enumeration of the flock owners selected, in which the following information was secured:

(1) Size of flock and breed of layers, (2) source of the birds in the flock, (3) rate of production, (4) eggs sold and marketing channels used, (5) grading practices, if any, employed, (6) production practices that influence quality, (7) layer house and egg-handling facilities, and (8) experience of operator in the market egg business.

The second phase of the survey was conducted through mailed questionnaires sent to selected producers as of July 1 and October 1, 1957, and January 1, 1958. These questionnaires included only those questions needed to indicate seasonal variations in layer numbers, replacement numbers, egg production, and differences between spring and fall marketing patterns.

## MASSACHUSETTS

Providing new basic data on vegetables (MASS-D-1)

Under this project, the Massachusetts Cooperative Crop Reporting Service again published a report on the planting intentions of vegetable growers in the State. This

report also provided on a Statewide basis comparative data for 1955 and 1956 on planted and harvested acreages, yield per acre, production, average prices received by growers, and farm value for each vegetable crop. A special feature of the 1957 report was a county-by-county breakdown of the harvested acreages of the different crops for the preceding two seasons. Also for the first time, production of the various vegetables was reported on a hundredweight basis.

Providing new basic data on cranberries (MASS-D-2)

This project was completed during the year. A bulletin containing the data collected was to be published in the fall of 1957, providing information on the acreage in cranberries, size of bog holdings, varieties, new plantings, and production and marketing practices.

## MICHIGAN

Developing methods of certifying nursery stock (MICH-A-1)

This project, to develop procedures for certifying disease-free nursery stock, has been under way for several years and now embraces most of the important fruits and berries grown in the State. The program has important economic implications to the nursery business and the fruit-growing industry in Michigan and nearby States which obtain much of their nursery stock from Michigan. Virus diseases in trees and plants take a heavy annual toll in losses of trees and plants and reduced yields and quality. Much of the work up to now has been concerned with the establishment of disease-free sources of propagation stock, since this is the first step in improving the quality and marketability of nursery stock.

Progress was made during the year in reaching agreement with nurserymen regarding provisions of a cherry budwood certification program. The main points agreed upon were that:

1. Cherry budwood can be certified only when obtained from sources that have been indexed at frequent intervals on Shirofugen cherry, or on virus-free Montmorency cherry, or both, and when found to be free of necrotic ringspot virus.

2. Each nursery should establish a cherry budwood source of its own, the original trees for the block to be propagated at Michigan State University on disease-free understock.

3. Each tree in the budwood block should be registered.

4. The Michigan Department of Agriculture should exercise control over the removal of registered trees and the addition of replacements.

5. The nursery should be required to locate the budwood block at a reasonably safe distance from other Prunus trees and follow recommended spraying schedules for control of insects and diseases.

6. Each registered tree should be indexed on Shirofugen cherry, should be given 2 visual inspections annually, and, every 4th year following registration, be indexed on disease-free Montmorency cherry.

7. Indexing of nursery budwood source should be done at Michigan State University through joint agreement between that agency and the Michigan Department of Agriculture.

8. A flat annual fee per registered tree should be paid by the nursery for inspection and indexing.

Michigan also has embarked on a pilot program to test certification procedures for strawberries. The serious effects of latent viruses upon plant vitality, yield, and quality of the fruit has been recognized only in the last few years. Michigan is an important producer of strawberries and a source of plants for neighboring States. This last year, some 30,000 virus-free foundation plants of the Robinson, Catskill, and Marshall varieties were released to cooperating nurserymen. The increase from this foundation stock may be sold under a special certification of the Plant Industry Division of the Michigan department provided the nurserymen follow specified procedures in their production.

Work was begun during the year to improve certification procedures for bramble plants and to investigate the need for a virus-free certification program for apple-tree nursery stock.

Improving grading, handling and packing (MICH-A-2)

Poultry and eggs.--Work was begun to assist poultry processors in improving their plant facilities, equipment, and processing methods so they would be able to comply with compulsory inspection for wholesomeness on interstate shipments of poultry, effective January 1, 1959. The program to improve the grading, packaging, and handling of eggs was continued. A survey made by marketing specialists in 17 cities of the State indicated that about 40 percent of the eggs being offered for sale were improperly marked as to grade. Producers, egg dealers, and retailers in the areas concerned were given explanations and demonstrations of proper grading methods and the requirements for identification on egg cartons. A noticeable improvement followed in the grade of eggs offered for sale and their identification. The Michigan department also continued its egg exhibits at the State and county fairs, to demonstrate quality factors involved in grading and to show the value of official egg grading standards in buying and selling.

Fruits and vegetables.--To promote better grading and packaging of fruits and vegetables, marketing specialists of the Michigan department conducted demonstrations of proper grading and packaging methods at meetings of producer and shipper groups. Special attention was given during the year to the problems of the Michigan potato industry, which is encountering more and more difficulty in retaining outlets because of improvements in grading and packaging in competing areas. Specialists assisted in organizing the Michigan Potato Industry Council, an agency which is to spearhead a program to recapture and expand outlets for Michigan potatoes.

Improving market news information (MICH-D-1)

The Michigan department started during the year an experimental market news program for poultry and eggs covering prices and volume of trading at country points. Information is being obtained daily from a selected group of dealers and released to news services and radio stations. A weekly summary of the price and volume data also is released. Buyers from whom this information is being obtained have given the department access to their records to check the accuracy of the reports.

Providing basic data and special marketing information (MICH-D-2)

Onions.--The approximately 400 onion growers and dealers in Michigan ordinarily have about 1-1/2 million bags (50 pounds each) of Michigan onions for sale after January 1 of each year. To plan effectively the marketing of these storage holdings, the growers and dealers need timely information on the progress and condition of the Texas onion crop. The Michigan department is meeting the need for this information through the issuance of weekly reports on the Texas crop, based on information supplied it by the Federal agricultural statistician at Austin, Tex. The initial release in this series included data on acreage, row spacing, and method of production, i.e., dry-land or irrigation, for the Texas crop.

The Michigan department also has undertaken a program to improve acreage and production estimates for Michigan onions. The use of objective sampling methods was

tested in the area to determine the costs and feasibility of making reliable production estimates by areas for the entire State.

Fruits. --The August production estimates for the principal varieties of apples were continued, to provide growers and packers with information needed for the most effective marketing of the crop. Data from the 1956 peach tree acreage survey were tabulated and summarized during the year.

## MINNESOTA

### Developing methods of certifying nursery stock (MINN-A-1)

The program to improve the acceptance and marketability of nursery stock was continued, in cooperation with the State agricultural experiment station. Both fruit trees and ornamental Prunus varieties are included in the program, because they are equally susceptible to infection and capable of disseminating the same injurious diseases. The greatest efforts during the year were in developing final plans for a certification program for stone fruits. The work consisted of increasing the supply of approved disease-free material for propagation, instructing nurserymen about procedures to be followed, issuing certificates to four qualifying nurseries, and supervising actual propagation procedures. The certified nursery stock resulting from this program will be offered for sale during the coming season. Most of the nurseries in the State which have not qualified under the certification program have applied to come under it. The Minnesota department prepared a publication during the year setting forth the requirements for qualification.

### Improving quality and expanding market outlets (MINN-B-1)

The dairy mobile laboratory was used in quality-improvement work in 50 dairy plants in west central Minnesota during the summer of 1957. These plants were located in an area comprising all of Douglas, Grant, Pope, and Stearns counties, and portions of Ottertoil, Traverse, and Wilkin counties. Assistance was provided dairy manufacturing plants in establishing uniform grading procedures and in locating and correcting conditions causing contamination and quality deterioration. The procedure followed was to take samples from incoming raw milk and from the processing lines in the plants, analyze them, report the results to plant managers, and assist the managers in eliminating sources of contamination.

There are many problems relating to the manufacture of butter in this area. A major factor in this situation is the change from the churning of farm-separated cream to a factory-separated milk operation. This change has caused difficulty in controlling bacteria in the manufacture of butter. Assistance given to the converted dairy plants included line tests at each phase of pasteurizing and churning operations. Bacteriological analyses of these samples at progressive steps have proved valuable to plant operators in eliminating contamination during the manufacturing process. In some plants, quality defects caused by worn, deteriorated, or defective equipment have been corrected. It was reported that, as a result of the findings of laboratory tests, many plants have replaced such items as can washers and cream-conveying equipment, and have made improvements in their water supply and water distribution equipment.

Work to increase the sale of milk through vending machines was continued. As a result, one large concession operator in the Twin-City area installed several milk vending machines.

During the last year, the department emphasized greater participation of private, parochial, and special schools in the School Lunch Program. Specialists contacted schools and institutions to inform them of the requirements for participation in that program.

Poultry. --The department, in cooperation with the Minnesota Poultry Industries Council, provided assistance in the promotional campaign to expand the use of turkey and other poultry meat on a year-round basis.

Eggs. --As a result of the enactment of the new State Egg Marketing Law, which became effective July 1, 1957, the department began additional matched-fund market service work on eggs. Demonstrations and egg-grading schools will be conducted throughout the State by marketing specialists to assist the industry in complying with this new regulation. The egg quality improvement phase of this program will emphasize the proper handling and displaying of eggs and also will include promotional activities to expand market outlets for graded eggs.

Meetings were held with representatives of the Northern Cooperatives, Central Cooperatives, Inc., and the Farmer Cooperative Service, USDA, to discuss the possibility of establishing market outlets for sections of the State producing a surplus of eggs. The principal topic at these meetings was the need to develop sales outlets in the deficit egg-producing areas of the State and to expand the sale of eggs in out-of-State markets for surplus eggs produced in west central and northwest Minnesota.

Maple syrup. --Assistance was provided maple syrup producers in Aitokin, Mille Lacs, Chisago, Isante, and Wright counties. During the initial phases of this program, emphasis is being placed on development of quality standards, a prerequisite to a successful promotional program. Specialists worked with producers on proper techniques for gathering sap, sanitation of storage tanks, proper care and use of evaporators, standardizing and grading of syrup with respect to color and clarity, and proper sanitation methods in bottling and storing maple syrup. Bacteriological tests were made from the samples drawn at each successive step in sap gathering, evaporating, and bottling. Assistance was provided also in proper packaging and labeling of maple syrup and in locating retail outlets.

Work was started with the Chippewa Indians at Grand Portage to determine the feasibility of establishing a maple syrup processing plant. The department specialist also assisted in organizing the Grand Portage marketing cooperative. It is estimated that there are 600,000 to 700,000 sugar maple trees on the Grand Portage reservation.

The department, in cooperation with the Minnesota Beekeepers Association, continued the quality and promotional program for Minnesota-produced honey.

Apples. --In cooperation with the Minnesota Apples Growers Association, the department initiated a program to assist apple growers in improving grading, packing, and labeling methods to comply with the new Minnesota apple grading and labeling law. Specialists conducted demonstrations throughout the State on grading techniques and proper packaging and labeling of containers.

Potatoes. --During the year, specialists participated in several meetings in the Red River Valley to explain the potato promotion referendum and the USDA potato diversion program.

Providing new basic data (MINN-D-1)

Milk. --The Minnesota Crop and Livestock Board continued its monthly dairy summary, which provides producers with a wide range of information on the marketing of dairy products, including milk marketing practices, prices, and utilization.

Calves. --Information was obtained on freshenings by months in an attempt to develop more complete and accurate information on the calf drop. Such information is of value to persons concerned with the seasonal cycle in milk production or the marketing of calves. The questions on freshenings were included on the quarterly hog survey questionnaires.

Turkeys.--At the request of producers, hatchery operators, and representatives of marketing agencies, a survey was made to obtain information on death losses and management practices for the Minnesota turkey industry. This was a followup to a similar survey made 5 years ago. The turkey industry wanted up-to-date information for guidance in the elimination of factors causing marketing problems and, in some flocks, heavy losses. The data obtained in this survey were published, along with production and marketing data, in a bulletin entitled "Minnesota's Turkey Industry," released in May 1957.

Grain.--The Crop and Livestock Reporting Service published reports containing production and marketing data on corn, soybeans, and flaxseed. Data also were collected, summarized, and published on grain stocks by geographic areas of the State.

Hogs.--The quarterly reports on sow farrowings and hog numbers were continued.

## MISSISSIPPI

### Improving milk quality and milk handling methods (MISS-A-1)

Quality improvement work under this project is conducted by making detailed surveys of milk handling and processing methods and equipment in areas having quality problems, and by assisting individual producers and plants in correcting conditions responsible for poor quality. In this work, the Mississippi Department of Agriculture and Commerce cooperates with Mississippi State College, the Extension Service, and fieldmen for dairy plants. During the last year, assistance in improving milk quality at the producer level was requested of the department by 19 of the dairy plants in the State. Help was given to about 400 producers delivering milk to these plants.

Through tests made by the dairy products laboratory at Mississippi State College, the Mississippi department was able to assist in numerous other cases where plants and producers were having difficulty in maintaining quality. It is estimated that the quality of about one-third of the nearly 1 billion pounds of milk produced in the State was improved under this program.

The Mississippi department is being called upon increasingly to provide services to dairy farmers who are planning to convert or have converted from milk cans to bulk tanks. Assistance was provided in such matters as the selection of bulk tanks, installation of the systems, and calibration of the tanks to insure that the farmer is paid for the correct weight.

### Improving egg quality and egg handling practices (MISS-A-2)

Work under this project has been under way for about a year. During that time, the Mississippi department has contacted practically all the handlers and retailers of eggs in the State to explain the Mississippi Egg Law, assist them in locating sources of high-quality eggs, and instruct them in proper methods of caring for eggs. Specialists of the department also visited most of the public eating places to encourage the use of high-quality eggs and to give instructions on proper methods of caring for eggs to prevent quality losses and the development of objectionable flavors. In cooperation with county agents, specialists assisted producers who carton their own eggs in packing eggs in accordance with official grade standards. Exhibits were set up at the State and county fairs to demonstrate differences in egg qualities, the various grade factors, and the importance of proper handling methods in preserving egg quality.

### Improving and expanding outlets for vegetables (MISS-B-1)

Under this project, marketing specialists of the Mississippi department, in cooperation with the Extension Service, continued to assist vegetable growers in improving their returns by (1) demonstrating proper methods of harvesting, grading, loading, and

packing, and (2) increasing outlets by providing current information to buyers on the location, volume, variety, quality, and time of harvest of Mississippi vegetables. Specialists of the Mississippi department held during the year nearly 150 harvesting, grading, and packing demonstrations, attended by over 10,000 growers and shippers of vegetables. In addition, specialists gave individual assistance to over 3,500 growers, and participated in 23 meetings in connection with specific projects to improve vegetable marketing.

Particular stress has been placed under this program on harvesting vegetables at the proper stage of maturity.

Providing new basic data and marketing information (MISS-D-1)

This project is designed to provide Mississippi producers, marketing agencies, and other groups with more detailed basic data concerning supplies, utilization, marketing methods, and facilities. Since the program was begun in 1954, it has done much to eliminate duplication of effort in gathering and disseminating marketing data on Mississippi agriculture.

Work was continued on the development of county data. Reports on a county basis were completed and released under the following titles:

Corn: Acres, yield and production (1949-1956)
Oats: Acres, yield and production (1950-1955)
Rice: Acres, yield and production (1949-1956)
Watermelons: Acres harvested (1949-1956)
Snap beans: Spring, acres harvested (1950-1956)
Tomatoes: Acres harvested (1950-1956)
Cabbage: Acres harvested (1950-1956)
All cattle and calves on farms (1950-1956)
All cows 2 years old and over on farms (1950-1956)
Cows, 2 years and over, kept for milk (1950-1956)
Hogs and pigs, all ages, on farms (1950-1956)

The program of expanded marketing information on vegetable crops, begun in 1954, also was continued. Under this program, acreage, yield, and production indications and estimates were released on a county or production-area basis. In addition, such information as planting and harvesting dates, progress of growing crops, and weather conditions was assembled and released regularly. These releases were used in connection with the work to expand outlets of vegetables reported under project MISS-B-1.

With the increasing importance of dairying in the State, particularly production of milk for fluid use, an insistent demand has developed for information on the status and trends in production and utilization patterns. At the request of the "Grade A" segment of the dairy industry, the Mississippi Crop and Livestock Reporting Service, in cooperation with Mississippi State College, started a monthly survey to obtain information on such factors as average production per cow in "Grade A" herds, utilization of the milk produced in such herds, seasonal patterns of milk production, amounts and kinds of feed fed, and sources of replacements. Monthly reports are being issued, based on these surveys.

To provide a means of checking yield estimates for the State's corn crop, the Mississippi Crop and Livestock Reporting Service is evaluating methods of objective sampling. Some 400 objective counts were made prior to the 1957 harvest season. It was reported that the data obtained in this way made it possible to improve the accuracy of yield estimates for the State.

Nearly 150,000 copies of various reports prepared under this project were sent during the year to producers, marketing agencies, and others, to inform them of the results of the surveys.

Improving quality and expanding market outlets (MO-B-1)

Livestock. --The Missouri Department of Agriculture continued to provide assistance to registered livestock breeders' associations in preparing and distributing brochures and directories aimed at finding markets and increasing the demand for registered livestock. Assistance in preparing brochures was given the Missouri Corriedale Association, Inc., the Missouri Yorkshire Association, and the Missouri Landrace Association. Directories listing animals available for sale were prepared and distributed to prospective buyers and livestock agencies. Numerous livestock producers in the State have written the Missouri department citing specific instances in which this service has helped to make sales.

Dairy products. --Under this program, all the butter and cheese plants of the State have been surveyed to determine what changes in facilities, equipment, and methods are needed to improve the quality of the products. The survey reports were used by the bacteriologist making them as a basis for initiating quality improvement work in each plant. Many plants have acted on the bacteriologist's recommendations. For example, at the time of the first survey in 1956 of cheese factories, 82 percent of the equipment and operations were rated satisfactory. A subsequent survey of the plants this year showed that 90 percent of the "items" observed were satisfactory. In creameries, the change was from 79 percent of the "items" satisfactory before the program to 86 percent satisfactory after about 1 year's work with the plants.

In addition to quality improvement work, the Missouri department continued to assist the dairy industry in promoting its products. The department worked with the American Dairy Association of Missouri in a tie-in promotion of cottage cheese and Cling peaches during the Lenten period. Several dairy products distributors commended the department for its part in this promotion. Assistance was provided again to the American Dairy Association of Missouri in conducting the June Dairy Month campaign, which was expanded to include 57 counties, contrasted with 16 counties the preceding year. Excellent cooperation in this campaign was received from local papers, food retailers, restaurants, and other local business concerns. For example, nearly 800 restaurants in the 57 counties featured dairy products and encouraged customers to drink more milk. Department specialists also helped plan and operate dairy promotional displays and dairy bars at the Missouri State Fair and other events in the State.

Apples. --In cooperation with the Missouri State Horticultural Society, the Missouri department continued the buyer informational service to expand markets for apples. This activity involved personal visits to the markets by a marketing specialist and the preparation and distribution to potential buyers of a bulletin showing the location of each apple grower and his estimated production by varieties and time of harvest. This bulletin, which alerted buyers to the apple supply situation in the State, was followed at weekly intervals during the harvest season by reports of the quantity each grower expected to ship during the following week and what he would have available for later shipment. Continued use was made of the dental film "Gateway to Health" to promote greater apple consumption, particularly at the elementary grade level.

Vegetables. --An information bulletin, similar to that for apples, was prepared and distributed by the Missouri department, giving the acreages and varieties of watermelons and cantaloups by counties, the location and names of the sales agencies, and the shipping points. The bulletin was prepared in cooperation with the county extension agents in southeast Missouri, where commercial melon production has been greatly expanded in recent years on land taken out of cotton production. It was reported that this service attracted numerous buyers who had never before purchased melons in the area.

The Missouri department and the Extension Service cooperated in providing the services of a vegetable marketing specialist to assist growers in the southeast Missouri area in planning their marketing programs, securing outlets, and adopting proper

harvesting and packing methods. This area is producing such crops as sweetpotatoes, bell peppers, okra, sweet corn, green beans, tomatoes, and cabbage, and has the potential of becoming a major vegetable area.

Strawberries. --Efforts to improve packaging of strawberries were continued in the producing areas of southwest and southeast Missouri. Several growers tried out plastic pint containers and fiberboard master containers to test the feasibility of switching to this type of package.

Providing new marketing information (MO-D-1)

Continuation of the quarterly sow farrowing reports constituted the only activity under this project during the year.

Developing an experimental market news program for poultry and eggs (MO-D-2)

The Missouri department started an experimental market news program for poultry and eggs late in the reporting year. So far, the major effort has been to develop daily broiler and turkey reports. Although this service has been in effect for only a short time, the department has received numerous letters from broiler and turkey growers commending the reports and expressing a desire that they be continued.

## MONTANA

Improving the quality of agricultural products (MONT-A-1)

Dairy products. --The quality of dairy products produced in Montana continued to improve under the stimulus of the marketing service program conducted by the Montana Department of Agriculture in cooperation with Montana State College. During the 5 years the program has been in operation, the quality scores of dairy products have shown substantial increases. Nearly 3500 quality tests of butter, ice cream, and cottage cheese were made during the year. Results of these tests were used by the dairy marketing specialists assigned to the program in diagnosing the sources of quality problems in the manufacturing plants.

Eggs. --A new phase of egg quality improvement was started during the year. This involved the organization of entire areas to produce and market eggs eligible for certification as "Gold Seal Eggs" under the Montana Quality Label Program. At the end of the year, 6 areas had qualified to use the label. It was estimated that producers in this program realized an average increase in price of 7 cents per dozen. Other phases of the quality program were continued on about the same level of intensity as in the preceding year. Marketing specialists visited most of the retail food stores in the State, checked the quality of eggs being displayed, and, where necessary, advised operators about sources of quality eggs and changes needed in handling and displaying eggs to maintain quality. Where eggs of unacceptable quality were from local sources, the specialists contacted the producers and assisted in improving the practices responsible for off-quality.

Providing basic data (MONT-D-1)

Assembly and publication of data on wheat production by protein content groups, for the principal wheat-producing counties in Montana, were continued. Data on premiums paid for high-protein wheat, production and disposition of barley and oats by varieties, and grain storage facilities on farms and ranches also were assembled and published. Wheat protein data for the 1955 crop and for several previous years were published in volume VI of "Montana Agricultural Statistics."

Montana wheat is recognized by the grain trade for its high protein content and is used largely for blending with other types of wheat for certain kinds of flour. This wheat

commands price premiums, and the premiums vary considerably from year to year, depending on demand for wheat of high protein content. The production of wheat protein in Montana varies significantly from year to year with fluctuating weather during the late stages of wheat maturity. Figures on production of Montana wheat by protein content groups have been published for each of the crops 1951 to 1955, in printed bulletins. The data for 1956 have been issued in mimeographed form, and will appear later in a printed bulletin. Studies are under way on the relationship of weather data and wheat protein. These studies indicate a significant correlation of precipitation and temperatures during July and August with the protein content of wheat, which may provide a basis for forecasting this quality factor for future crops.

Production of barley in Montana has gained much prominence, and that grain is the most suitable to replace spring and winter wheat. During the year, information was assembled on barley acreage and production, according to growing practices and disposition of barley on Montana farms for the period July 1, 1956, to April 1, 1957. These data, with some historical information on barley production in Montana, were for publication with the wheat protein data in October 1957. The bulletins are for distribution to all wheat and barley dealers in the State, to county extension agents, county ASC offices, county Farmers Home Administration offices, bankers, railroad officials, and other individuals and firms connected with the production and marketing of Montana wheat and barley. Wheat and barley are grown on approximately two-thirds of Montana's 35,000 farms and ranches and are sold to about 500 grain dealers.

Work also was started on the assembly of figures on cattle marketings in Montana by months, by counties, by classes, and by States of destination. This information for 1956 and 1957 was for publication early in 1958.

## NEW JERSEY

### Expanding outlets for poultry and eggs (NJ-B-1)

This project was begun late in the year, but considerable progress was made in laying the groundwork for the promotion of New Jersey poultry and eggs. The quality improvement phase of the program was started with the assignment of several specialists to survey egg handling and marketing practices at the farm, packing plant, and auction. This work is being done in cooperation with the Extension Service. The immediate goal of the quality work is to enable egg producers to deliver a minimum of 85 percent Grade A quality (wholesale). The industry, on recommendation of the New Jersey Department of Agriculture, is considering establishment of price premiums for deliveries of eggs of higher minimum qualities.

Provisions of the quality control plan have been discussed with the New Jersey State Poultry Association and have been adopted. Under this plan, all New Jersey-produced eggs meeting the specifications for New Jersey official consumer Grades A and AA and packaged under the supervision of the New Jersey department will be eligible for marketing under a newly developed State seal of quality. At the end of the year, this seal was being "test run" on egg cartons, in cooperation with several egg distributors.

Preliminary steps were taken toward development of a marketing program for poultry through the formation of the New Jersey Poultry Meat Growers Association and through exploratory work in broadening market outlets for fowl culled from laying flocks.

### Providing basic data and marketing information (NJ-D-1)

Fruit and berries.--A fruit tree survey was conducted during the year and preparations were begun for issuing the report. Results of the blueberry and cranberry acreage surveys were published. Special reports were continued on apple production by varieties and current production of cranberries and blueberries.

Vegetables. --The weekly report "New Jersey Truck Crop News" was continued. This provides current information by areas on the production and marketing situation for about 20 vegetables. Special reports were continued covering acreage, production, and yields of potatoes and commercial vegetables for processing.

General. --Special reports were again provided to producers regarding spring and fall pig crops, prospective turkey production, the livestock and poultry inventory, and county estimates of milk cow numbers and milk production.

## NEW YORK

Providing marketing information and expanding market outlets for New York agricultural products (NY-B-1)

Eggs. --In cooperation with the New York State Poultry Council and the Extension Service, the New York Department of Agriculture and Markets planned and staged an egg promotional exhibit at the State fair which was viewed by about 200,000 consumers. The theme of the exhibit was egg quality, and special emphasis was directed to the fact that New York State is a producer of high-quality eggs.

The experimental market news service under which producer prices are reported on a semiweekly basis was continued. Under this program, prices paid producers by grade, size, and color were obtained from 35 large buyers and reported each Tuesday and Thursday on a three-area basis, for (1) Buffalo, (2) central New York (Rochester, Syracuse, and Utica), and (3) the Catskill Mountain (Hudson Valley) area. The Farm Bureau, North Eastern Poultry Producers Association, local poultry organizations, chain stores, and producers are cooperating in this program. The objective is to assist in establishing a pricing system for eggs in these areas which will more nearly reflect local supply and demand conditions.

Dairy products. --The department placed emphasis on a program to expand the consumption of fluid milk, cheese, and other dairy products. In this work, marketing specialists held several meetings with school superintendents and principals, directors of summer camps, local dairy councils, key city officials, labor union representatives, and management officials. This program has resulted in an increase in the consumption of fluid milk by schools and other organizations eligible to participate in the School Lunch Program and the Special Milk Program. It was reported that 1,152 schools participated in the Special Milk Program and 2,105 schools participated in the School Lunch Program in New York State during 1957. Work on increasing the sale of milk through vending machines was continued. As a result, during the last year milk-vending machines were installed in 37 industrial plants. As a phase of the market expansion program for dairy products, the department, in cooperation with the New York State Cheese Manufacturing Association and Cornell University, made a 13-minute colored film which shows the steps in the manufacture of cheese. This film has been shown on several television programs, at several milk industry meetings throughout the State, and at the 1957 State fair.

Apples. --The New York weekly f.o.b. packing house apple report was continued. The information in this report was obtained by personal contact from 300 cooperators in the Hudson and Mohawk Valleys and the Lake Champlain area. This report carried information on prices according to variety, grade, size, pack, condition, current demand, movement into and out of storage and to retail stores, cold storage holdings, and processing prices. It was mailed to about 400 producers, buyers, and other interested persons.

By keeping producers better informed of prevailing apple prices, this service has been a factor in minimizing "panic selling" and the dumping of apples in various markets. As a phase of this program, a special market information letter was prepared by the project marketing specialist, which provided information on the quality, supplies,

and location of apples in New York State. This letter was sent to over 1,000 truckers and brokers in States east of the Mississippi River. These activities are reported to have resulted in more orderly shipments to market and in bringing better prices to New York State apple producers.

Vegetables. --The New York department assisted 10 large Long Island potato shippers in developing a program to market potatoes under the Empire State trade-mark. Potatoes or other New York agricultural products to be sold under this label must be officially graded and meet certain other requirements set forth by the State department. The potato promotion program received excellent coverage in trade papers and industry periodicals. The "kickoff" feature of the program was the presentation of a 10-pound bag of potatoes bearing the Empire State label to Governor Harriman at the Executive Mansion in Albany Walter E. Stark, president of the Long Island Agricultural Marketing Association, made the presentation.

A survey was made in the Elba muck area to determine the adequacy of existing marketing information for onions. The survey indicated that most of the onion growers favored expanding the market information program to include a weekly report, with a narrative summary on the available supply and market conditions for New York State and competing areas.

Beginning August 13, 1957, and continuing during the marketing season, an f.o.b. packinghouse onion price report for Orange County was released. This report contained detailed information on prices, market conditions, weather, etc. It is planned to include the Elba, Canasta, and Oswego areas in next year's report.

A weekly fruit and vegetable marketing report was issued beginning on July 10, 1957. This report, which includes information on time of harvest, condition of crop, shipments, storage figures, and price quotations was sent to a mailing list of about 350 persons.

Christmas trees. --The Christmas tree market information report was continued. Weekly reports based on information obtained from growers were sent to about 770 growers, county agents, and buyers during the marketing season. This report contained information on prices of different varieties, whether trees are sold cut or on the stump, age, height, degree of color, general condition, and the supply shipped in from Canada to New York City.

The market report has enabled many producers to obtain increased net returns for their Christmas trees by taking some of the guesswork out of the marketing of a highly specialized product.

Livestock. --Monthly figures were obtained from 59 livestock auctions in the State. These data were published in a quarterly report which is sent to livestock auctions, buyers, county agents, and colleges. The quarterly report included a breakdown of the volume of sales by classes, grades, and types of animals.

These reports provide the only information on auction sales of livestock in the State, through which much of the livestock sold passes. The information in the livestock report enables the department to figure seasonal trends in movement as well as to judge the effects of other factors on livestock movement. Knowledge of these trends makes it possible for the department to aid the industry by setting up regulations on sales. The U.S. Department of Agriculture also has used the information in its livestock sales figures, and the auctions have used it as a guide in estimating their volume of business.

Maple products. --The maple products report was continued, providing market information on quality, quantity, demand, supply, bulk and gallon prices by grades, and production prospects, including information from other areas. The report was issued on the basis of three producing areas: (1) Northern, (2) western, and (3) central eastern New York. During the last marketing season, over 600 copies of the weekly report were sent

to cooperating producers, county agents, newspapers, radio stations, and other organizations. These reports are the only market information available to the State's maple products industry, which annually provides about 2 million dollars of income to producers. The availability of this type of information has eliminated some of the guesswork in maple product sales, helping producers to obtain higher net returns for their products.

Improving facilities and marketing operations (NY-C-1)

Work was continued on the development of attractive and uniform packages for fruits and vegetables. Meetings were held with the Extension Service fruit and vegetable committees. In addition, a steering committee was organized to develop a uniform packaging program for the Genesee Valley market area. The steering committee developed a list of uniform package recommendations for lettuce, onions, tomatoes, corn, cauliflower, potatoes, peaches, grapes, and other important fruit and vegetable crops grown for market in the Genesee Valley regional market area. The packaging recommendations were sent to cooperating package manufacturing companies, wholesalers, retailers, truckers, and producers.

The following must be achieved before this program can be effectively developed: (1) Reduce the number of recommended packages to a minimum, (2) maintain an up-to-date list of uniform packaging recommendations, and (3) obtain the cooperation of producers and handlers in adopting the uniform package recommendations.

During the year, the following progress was reported in implementing the use of uniform packages or containers: (1) Adoption of the single type of fiberboard package for lettuce was expected as a result of successful use of this box (18-24 heads of lettuce packed in a box) during the 1957 marketing season by growers in the Prattsburg muck area, (2) cantaloup growers considered using a wirebound crate which is satisfactory for shipping purposes, but the present cost of this crate appeared to be too high, (3) cauliflower growers made greater use of the Long Island type of cauliflower crate, (4) the 10-pound fiber basket was recommended for shipment of tomatoes to markets beyond the production areas, (5) the use of 15 three-pound or 10 five-pound polyethlene bags shipped in master paper bags was recommended for shipping onions to market, (6) successful tests were made in the marketing of grapes in 12 two-quart baskets per container, and (7) a fiber box designed for packaging tree-ripened peaches has been developed and will be tested during the next peach marketing season.

Providing new basic data (NY-D-1)

The detailed acreage survey of the muckland areas was completed during the year. This survey obtained information to improve crop estimates and to provide a basis for more accurate production forecasts in Orange, Elba, Madison, Oswego, and Wayne counties. The muck acreage surveys are especially helpful to onion growers in planning their marketing. The fruit tree survey of commercial orchards (100 or more trees) in Lake Ontario county was completed. The summarization of these data indicates tree numbers by age and variety.

All grape processors cooperated in the after-harvest survey during the last year to determine the tonnage by variety from various production areas of the State. The published report on the findings of the survey also contains information on the primary uses made of the product and the average prices per ton paid to producers.

Data on monthly milk supplies and use were compiled for 12 major up-State milk marketing areas not covered by marketing orders. This information is used by the dairy industry in determining trends in fluid milk sales and the amount of surplus milk in various market areas.

Testing cotton fibers (NC-B-1)

A major problem in the marketing of cotton is to channel cotton of particular quality characteristics to mills needing the particular qualities for specific end uses. Although laboratory test data are not a price factor in market prices for cotton, they do determine to a large extent the selection of cotton for the particular use of each spinner. The plan of operation was to select ginning and marketing points (27 of them) in the State from which 20 samples for testing were secured each week. On alternate Fridays, test results for the preceding 2 weeks were released to cotton merchants, mills, shippers, and others interested in southeastern growth. Copies of the releases were distributed in foreign markets by the Atlantic Cotton Association. This marketing service was well received by cotton mills and cotton merchants, and through it the North Carolina Department of Agriculture has been able to assist a number of mills with spinning problems and in setting up private laboratories.

Improving marketing practices and expanding outlets (NC-B-2)

Fruits and vegetables. --The North Carolina department added two marketing specialists during the year to meet the demands from fruit and vegetable growers for greater assistance in improving marketing methods and expanding outlets. As a result of reduced cotton and tobacco acreages, farmers in North Carolina have turned increasingly to fruits and vegetables in an attempt to maintain their incomes.

The specialists assisted numerous producer groups with problems of proper harvesting and grading, selection and operation of equipment, and securing outlets. The following outline describes the procedures followed in planning and conducting a typical program, involving sweet peppers:

"The pepper project covers 5 piedmont and 2 southwestern counties where specialists worked with 403 farmers producing peppers for processing. The request for this assistance came from the processors after they could not get enough peppers to keep their plant operating, even though there was enough acreage contracted to furnish the volume needed. A marketing specialist contacted each producer who had signed a contract and explained the contract system, which is new to North Carolina farmers, especially in the piedmont area of the State. Followup visits to each of these farmers were made to advise them on proper maturity of peppers and harvesting techniques. This assistance has prompted the owners of this plant to keep it in operation in North Carolina and increase its production by processing other commodities. At present, this plant is spending approximately $230,000 each year for labor and raw materials."

Another successful program of the department was carried out with growers of Irish potatoes in 13 eastern counties of the State. Under this program, specialists planned and prepared more than $5,000 worth of advertisements for trade papers, the cost of which was borne by the industry. They also assisted in promoting the new variety, Plymouth, at a price premium of $1 per 100 pounds. They assisted in enlarging packinghouse facilities and in buying proper equipment for them. Assistance in improving harvesting and grading practices was given to 507 potato producers through community meetings and a general meeting where equipment and packaging were displayed. These meetings were held in cooperation with extension horticulturists and county agents.

Other groups assisted included producers of onions, peaches, apples, watermelons, cantaloups, sweet corn, cabbage, and lettuce.

Livestock and wool. --The North Carolina department continued to sponsor special sales to facilitate the marketing of small lots of animals and to demonstrate the advantages of selling livestock on the basis of uniform grades and weights.

Twenty-one grading demonstrations were held where hogs were graded and sold by grade, and the carcasses checked in most instances. Following these demonstrations, six buying stations and packers adopted official grading services. Specialists of the North Carolina department supervised the training of the graders. It is anticipated that 10 to 12 buying stations will be using this service by July 1958, which will mean that a high percentage of North Carolina hogs will be marketed on a grade basis, as well as by weight. Another phase of hog marketing work included organization of the movement of over 1,200 feeder pigs from the piedmont and western North Carolina counties to the surplus feed area in eastern North Carolina.

During the fall of 1956, 5,767 feeder calves were marketed through 10 feeder calf sales held at various points over the State. The calves averaged 463 pounds per head and sold for an average price of about $18.50 per cwt., totaling $492,016.42. North Carolina specialists were instrumental in organizing and conducting each of these sales. Prices of these calves averaged about 2 cents per pound above prices of calves of equal grade and quality sold through weekly auction sales. Schedules and plans were made for the 1957 sales. Specialists organized and conducted similar sales for other classes of cattle. Work also was continued in improving wool marketing through assistance in organizing wool pools, through which over 200,000 pounds were marketed on a grade basis.

Poultry and eggs. --Sharply increased production of eggs and more exacting quality requirements by consumers resulted in increased demand upon marketing specialists for assistance to producers, egg dealers, and retailers. The scope of the marketing service work with eggs is indicated by the following examples of activities:

1. In a 16-county program, specialists helped individual producers in adopting proper cleaning, grading, and packaging methods to enable them to make direct delivery of eggs to retail stores.

2. In another area, comprising 27 counties, specialists conducted training programs in egg grading and handling practices to assist 8 producer associations in improving the quality of eggs packed, so as to find more attractive outlets.

3. Specialists assisted 577 retailers in 120 cities and towns in adopting proper methods of refrigerating and displaying eggs and in finding sources of high-quality eggs.

4. Specialists conducted a series of 25 egg-grading schools at which about 300 persons from 87 counties received training. A grading school also was presented by television over one of the State's largest stations.

5. Specialists assisted 13 egg dealers in establishing graded-egg buying programs.

6. Specialists took an active part in an egg promotional program during the spring of 1957. One of the specialists served as State chairman of the campaign.

The North Carolina department also was called upon to provide increased assistance to poultry processing plants in improving plant facilities, operating efficiency, and quality of product. This marketing service program, since its inception about 1949, has contributed greatly to advances in technical efficiency. Growth of the broiler industry has been characterized by the concentration of volume in fewer plants. Last year, for example, the 53 plants in the State processed about 280 million pounds; the 185 plants in 1949 processed only 64 million pounds. Some of the activities of the department last year included assistance to 8 processors in redesigning plant facilities and installing and rearranging equipment to meet official sanitation requirements, training of workers in 13 plants to increase labor efficiency and improve product quality, and participation with North Carolina State College in a survey and analysis of broiler processing costs.

Tobacco. --The revolution in the tobacco industry which has resulted from the rapid shift in consumer preference toward filter-tip cigarettes has created an uncertain market for

tobacco farmers, with weakening demand for certain grades and a lower total demand for tobacco. The current problems and market situation make it necessary that growers do a better job in preparing tobacco for market according to U.S. standard grades and market demand, since better practices will increase the growers' returns from tobacco and partly offset the deficit in their income. Many tobacco farmers, however, still lack knowledge of standard grades. This complicates the marketing problem and makes it difficult for them to apply the standards in farm sorting their tobacco.

The marketing problem has been further complicated by discounted and mixed varieties of tobacco, because of which many growers are likely to suffer economic loss, even with the best preparation and marketing practices.

Knowing the seriousness of these conditions, tobacco marketing specialists of the North Carolina Department of Agriculture concentrated their efforts during the last year on marketing services that would help growers determine, before planting, the kind of tobacco expected to be in strongest demand. Considerable assistance was given also in helping them improve their preparation and marketing practices in selling flue-cured and burley tobacco, so as to increase the market value of their crops.

During the reporting period, specialists conducted 120 meetings in 28 flue-cured and 7 burley tobacco counties. About 3,025 farmers and FFA and 4-H Club members participated in these meetings.

Beginning in January 1957 and continuing through the first half of the year, meetings were held with farmers, in cooperation with vocational agriculture teachers, county agents, and farm organizations, at which an analysis was presented of the tobacco situation as it relates to stocks on hand, domestic and export disappearance, changes in consumer preferences, and developments in the industry. These factors determine the kind of tobacco that will be in strongest demand during the oncoming marketing season and give the grower a chance to adjust farming practices to market demand.

The farm sorting and market preparation phase of the program started in July was continued through the marketing season. Meetings were held at which farmers were given training in a simple method of farm sorting tobacco into standard grades. Proper lighting equipment for sorting tobacco was demonstrated, and growers were instructed on proper methods and facilities for conditioning tobacco prior to sorting, and on proper assembly and packing of tobacco for market. Farmers attending these meetings indicated later that they were able to increase the value of some barns of tobacco by $10 to $40 by following recommended practices.

As in the past, the service program conducted by tobacco specialists of the department was coordinated with work of other State and Federal agencies to achieve maximum efficiency and eliminate duplication of effort.

Dairy products. --One of the most important aspects of the work in dairy marketing during the reporting period was promotional, aimed at bringing about an increase in the consumption of fluid milk and other dairy products. These efforts were concentrated upon young people--primarily school children.

The specialist conducting the promotional work also assisted dairy plants and schools in overcoming handling and storage problems interfering with expansion of use of milk in schools. The specialist observed handling methods of milk at schools throughout the State, and advised the dairies where improper handling methods existed. Assistance was provided also in locating satisfactory refrigeration equipment for small schools and in referring to the dairies the names of schools that might join in the Special Milk Program.

While mass media permitted the specialist to maintain indirect contacts throughout the State, most of the assistance to pupils and teachers was directed to those in eastern North Carolina, where the need seemed greatest. The activities of the specialist included

1. Planning and conducting meetings of pupils and teachers at which illustrative talks were given, pointing out the necessity for drinking milk. Discussions were held and ideas presented at these meetings for projects and activities on which pupils continued to work.

2. Holding special meetings with teachers, at which they were urged to use the school lunchroom and Special Milk Program. They were told of the need and reasons for increasing milk consumption and were furnished source materials and ideas for projects. Approximately 225 meetings with pupils and teachers were held in 90 schools during the year, with more than 29,000 pupils and 1,000 teachers attending.

3. Making individual contacts with school principals and attending special meetings of principals to increase the use of milk in schools.

4. Participation in local PTA meetings, a school superintendents' conference, and meetings of lunchroom supervisors to promote greater use of dairy products.

The specialist participated in June Dairy Month activities, a promotional program which is becoming more outstanding each year in North Carolina, and, in addition, was instrumental in planning and staging a large dairy exhibit at the State fair.

In conducting these activities, the specialist maintained a close working relationship with extension nutritionists, public health nutritionists, home economists, health educators, lunchroom supervisors, dairy products associations, and dairy farmers' organizations.

Special news releases of a promotional nature were mailed periodically to both daily and nondaily papers throughout the State. In addition to the special releases prepared for June Dairy Month, 8 other releases were mailed to 80 of the leading newspapers throughout the State.

While the dairy picture in North Carolina is improving, there is still much to be done in the field of marketing. On the brighter side, sales of fluid milk and cream to consumers during the first 6 months of 1957 were 7 percent over the same period in 1956 and 16 percent over 1955. The schools on the Federal programs used about 119,025,800 half pints of milk during this period. This represents a steady and substantial increase over previous years.

Improving efficiency of cotton gins and cornmeal mills (NC-C-1)

The major cotton marketing problem at the beginning of this project in 1948 was "rough prep" (poor ginning) and inadequate pre-ginning cleaning and conditioning of seed cotton. These deficiencies were costing North Carolina cotton farmers more than a million dollars annually. Assistance to gins in improving operations, supported by all agencies and interests concerned with cotton quality improvement, has practically eliminated "rough prep" in North Carolina. These gains have not been achieved without losses.

The new problem is to avoid damage to the spinning properties of cotton fiber while preserving the maximum potential grade value of the seed cotton. Gins equipped to offset present-day harvesting practices often increase the percentage of fibers shorter than one-half inch by as much as 50 percent. Apparently, all spinning properties are damaged to some degree. Cotton ginning processes have practically no instrumentation or automatic controls. Any adaptation of processing to individual bale conditions must be determined by the operator and adjustments must be made manually if possible. Thus, the skill of the operator is of paramount importance.

During the year covered by this report, 450 gin visits were made to (1) inspect gin equipment and facilities, (2) engineer changes in equipment, and (3) inform gin employees on gin processing techniques. Contacts with cotton mills were increased, and they proved to be valuable in securing information for ginners about the importance of

spinning properties. Arrangements were completed during the year with the research laboratory of one of the largest textile corporations in the southeast to run spinning tests on nine different combinations of gin cleaning and conditioning.

Assistance to gin operators in Virginia is provided by the North Carolina department under a joint arrangement with the Virginia Department of Agriculture and Immigration and the Virginia Agricultural Extension Service. The improvement in ginning operations in Virginia under the program has paralleled that in North Carolina.

The major problems of the 400 or more corn mills in North Carolina (some of which are located in each of the 100 North Carolina counties) are to (1) improve the quality of their product, (2) procure raw materials suitable for human consumption, and (3) comply with pure food laws. Although North Carolina produces 60 million or more bushels of corn annually, no practical plan for isolating 6 or 8 million bushels for the milling trade has been developed. The operating policies of the industry itself have been the principal handicap. The majority of corn mills in the State are family-owned and -operated enterprises. Capital is limited, and the area of operation is seldom more than countywide. Competition is keen and on a price basis.

Assistance to these mills involved mill-to-mill visits in order to (1) inspect sanitary conditions and mill equipment and operation, and (2) demonstrate the adjustment and maintenance of cleaning and packaging elements. These contacts afforded excellent opportunities for promotional work with respect to operating policies of management. Fortunately, some millers in the State appreciate the present situation of the milling industry. They have substantial investments in the milling business and are fully cooperating in the program. Most of them have managed to erect private corn storage and drying facilities to meet their own needs and assist many of their fellow millers.

At the request of the milling industry, the North Carolina department developed and issued voluntary standards for milling corn for the State. These standards afford a basis for developing uniform trade practices.

Improving facilities and methods for handling grain (NC-C-2)

The sharply increasing production of grain in North Carolina has created problems of adequate drying, storage and processing facilities, and improving grain marketing methods. These problems require a solution if the producer is to receive full value for his grain.

Work conducted by the North Carolina department under this project has contributed significantly to the progress made in dealing with these problems. However, much work remains to be done on each phase of grain marketing. For example, there is a need for more public storage, so that growers can exercise greater choice of marketing periods, and for increased use of uniform grades and standards in pricing, to facilitate trading and stimulate quality improvement. There is likewise continuing need to improve facilities and grain-handling methods and equipment.

Activities reported by the North Carolina department for the last year include:

1. Assistance to 41 firms in remodeling facilities and planning new facilities. Ten of the firms assisted remodeled to the extent of installing bulk dump pits, power hoists, larger turning and elevating equipment, and commercial grain dryers; 24 firms built new storage and marketing facilities to handle about 1.4 million bushels of grain. One of the firms was assisted in developing plans for a modern soybean crushing plant.

2. Assistance was provided in planning a port facility with 500,000 bushels of storage capacity to facilitate export of North Carolina grain.

3. To assure a better job of marketing grain on a grade and quality basis, specialists demonstrated proper grain inspection and grading procedures at 156 grain marketing

points, training nearly 900 persons. In addition, they cooperated with the North Carolina Grain Production and Marketing Committee in giving grain-grading demonstrations and discussing grain marketing on a grade basis, in 11 county grain school with 168 farmers and dealers attending. During a 1-week grain-grading short course at North Carolina State College, specialists taught grading and supervised practical exercises which included the use of grain-grading equipment and techniques.

4. Assistance was given 21 dealers in establishing procedures for buying grain on the basis of moisture content. This is usually the first step toward establishment of a complete grade-price buying system. By reducing losses and stimulating competition, the work under this project has improved grower returns by many thousands of dollars. Several of the projects being developed are expected to improve further the competitive position of the North Carolina grain producer. For example, the establishment of a grain exporting terminal and a soybean crushing plant in the State is expected to reflect an additional 10 cents per bushel in producer prices for soybeans.

Providing new basic data (NC-D-1)

A survey of the commercial sweetpotato industry was made during the year to improve the accuracy of estimates of production and storage holdings.

## NORTH DAKOTA

Improving the quality of milk and dairy products (ND-A-1)

The service program to maintain and improve the quality of North Dakota products was continued. Meetings were held with 326 prospective producers of Grade A milk in 20 local milksheds throughout the State. At these meetings, a specialist of the North Dakota Department of Agriculture and Labor outlined the requirements for Grade A milk. Specialists also assisted producers in qualifying by furnishing plans for barns and milkhouses which complied with Grade A standards, and by helping them with problems of remodeling and selection and installation of up-to-date equipment. To date, five of these North Dakota milksheds have qualified for a Grade A rating and the other 15 were expected to meet the Grade A requirements about January 1, 1958.

This program has been instrumental in bringing about an increase of about 30 percent in milk classified as Grade A during the last 3 years. Under the stimulus of this program, about 50 cream stations installed walk-in coolers for holding cream, and many dairy plants purchased and installed the latest types of equipment in order to obtain a high degree of quality control and an efficient plant operation. One plant invested over $100,000 in new equipment, which included automatic controls and high-temperature flash pasteurization equipment, with an automatic bottler attachment that makes it possible to preheat, clarify, pasteurize, homogenize, and bottle milk without any human contact after it leaves the receiving room. A considerable improvement in the quality of separated cream was noted since the inception of this program.

This project is Statewide, and it is reported to have had a beneficial effect upon the quality of over 50 million pounds of butter, about 25 million pounds of whole milk, and nearly a million gallons of ice cream, being produced, assembled, and processed by approximately 20,000 dairy farmers, 340 cream buying stations, and 110 dairy plants in the State.

Preventing deterioration and contamination of grain in storage (ND-A-2)

The North Dakota department intensified its efforts to prevent the contamination of grain in storage by more than doubling the personnel assigned to this work. This program is a cooperative activity of the North Dakota Clean Grain Committee, Extension Service, North Dakota Agricultural College, and County Crop Improvement Associations.

During the year, 21 countywide programs were conducted. In these programs, North Dakota specialists held numerous meetings with farmers and elevator operators to explain and demonstrate effective rodent control. During the countywide programs, 26,000 pounds of rat and mouse bait were distributed for use in 44 towns, 53 dump grounds, 118 Government storage bins, 27 elevators, and many farms throughout the State.

Information on methods of preventing deterioration and contamination of grain in storage also was disseminated by specialists through television appearances, and copy was prepared for newspaper articles.

The North Dakota department reported that no cars of grain were seized by the Food and Drug Administration last year from any county in the State where a "clean grain" program was conducted.

## OHIO

### Improving price information (grain and hogs) (OHIO-D-1)

Grain. --The experimental market news program initiated last year to provide daily price information on cash grain at country points in central and southwestern Ohio was expanded during the year to cover the entire State. These daily reports, which provide price information for wheat, corn, oats, and soybeans, were carried by the wire services and disseminated through 14 newspapers and 30 radio stations. About 100 country elevators in Ohio are cooperating in this project by providing price information.

Hogs. --Under the experimental market news program for hogs, daily reports on supplies and prices at some 85 interior hog markets were disseminated to producers and buyers through mailed reports and through 18 newspapers and 14 radio stations in the State. Hog production in the area covered by the reports represents about 65 to 70 percent of the State's total. This service has provided information needed by interior yard operators to establish their buying prices more in line with actual market values. As a result of the improvement in the pricing mechanism, hog producers selling at these markets are receiving 25 to 75 cents more per 100 pounds than otherwise would be received.

### Providing new basic information (hogs) (OHIO-D-2)

The quarterly (March and September) reports on sow farrowings and hog numbers were continued.

## OKLAHOMA

### Improving quality and expanding market outlets (OKLA-A-1)

Poultry and eggs. --The Oklahoma State Board of Agriculture continued its program designed to supplant the system of purchasing eggs on a current-receipt basis with a graded-egg purchasing system. Purchasing on a current-receipt basis penalizes the producer who attempts to improve quality, and this method is a major barrier to quality improvement in the State. The immediate goal is to establish at least one graded-egg buying station in each county. So far, such buying stations have been set up in 56 of Oklahoma's 77 counties.

Vegetables. --Extremely adverse weather made it impossible for vegetable growers to adhere to the quality standards which the Oklahoma board has been recommending in its marketing assistance program. Because of the loss in quality due to weather, it was necessary to locate outlets which would handle products of less than top quality. The board was able to assist shippers in finding such outlets for a variety of vegetables.

Hay. --Because of drought, the Oklahoma board was called upon to assist in determining the volume and types of hay needed by farmers in the State and in locating sources of hay.

Honey and pecans. --Marketing specialists worked with retailers in improving merchandising and display methods for these products, and informed the retailers regarding the grades of the products and the advantages of buying on a grade basis. The program of encouraging pecan shellers to buy on the basis of grades was continued.

Livestock. --At the request of the Tulsa chamber of commerce, the Oklahoma board and Oklahoma State University initiated a cooperative project to determine the need for expanded and improved packinghouse facilities and related livestock feeding establishments in the Tulsa area. The survey of consumers, retailers, and packers has been completed and the data are being analyzed. The survey data also will provide producers with indications of the qualities of livestock which may be most profitably produced for the Tulsa market under present conditions.

Market information. --The Oklahoma board continued its program of providing producers and marketing agencies with daily reports on the price and supply situation for poultry, eggs, butterfat, alfalfa, grain, and pecans. These reports were based on transactions at country points and were given wide circulation through the free facilities of the press, radio, and television. This information has improved the bargaining position of producers and has helped to eliminate the wide price discrepancies at local levels noted when the program was started.

## OREGON

### Maintaining the quality of stored filberts (ORE-A-1)

Filbert production in Oregon and Washington fluctuates greatly from year to year, creating a need for a storage program in large-crop years in order to stabilize and expand market demand for both unshelled and shelled domestic filberts. The work under this project is intended to furnish information to packers and shellers on the influence of various processing procedures on subsequent storage stability of filberts, on specific conditions necessary to maintain optimum quality during storage for varying periods, and on practical methods of adapting available facilities and present practices to obtain maximum quality retention.

Results to date indicate that there is no advantage to be gained through enzyme inactivation by heat treatment before storage of either shelled or unshelled filberts. The packaging of filberts in closed atmospheres of nitrogen or carbon dioxide or in a vacuum helped maintain quality over long storage periods, provided temperatures were not excessive.

### Improving quality and marketing procedure (potatoes) (ORE-A-2)

The general plan under this project is to assist warehousemen and shippers in adopting practical methods for predetermining the cooking qualities of potatoes, and to inform them of the effects of storage and other factors on cooking quality, so that they can more effectively carry out merchandising programs.

Potatoes were sorted at harvest according to their specific gravity, and lots were stored under normal and controlled storage conditions for 2, 4, and 6 months. The effects of the different storage conditions upon specific gravity and upon the suitability of potatoes for particular cooking uses were determined and the results furnished to warehousemen and shippers.

A survey of consumers, carried on by the home economists at Oregon State College, indicates that consumer preferences were for mealiness and dryness in baked potatoes, fluffiness and lack of lumpiness in mashed potatoes, and no breaking during boiling.

The division of plant industry expects to use the results of the program as a basis for revising potato standards so they will conform more closely with consumer demand.

Improving the quality and handling of seed (ORE-A-3)

Oregon is one of the major producing areas in the United States for seeds of pasture and turf grasses. This project is carried on jointly by the Oregon Department of Agriculture and the Oregon Agricultural Experiment Station. It is designed to encourage and assist in the adoption of the best known seed processing and storage practices.

Forty-six lots of seeds were stored in 17 cooperating warehouses scattered over the Willamette Valley, which is the major Oregon growing area for seeds of common ryegrass, highland bentgrass, alta fescue, Chewings fescue, Sudangrass, and crimson clover.

Beginning in November 1956, monthly samples were taken to determine moisture content and germination percentage of the sample taken from each seed lot. These surveys over a 9-month period showed (1) a general picture of moisture changes in seeds of different crops, (2) the longevity of Oregon processed seed stored under Oregon climatic conditions, and (3) the relation of storage conditions to seed longevity.

This information is being used in initiating a program for the adoption of the best storing methods for the various seeds.

Development of methodology for certification of virus-free fruit, tree nut, and vine nursery stocks (ORE-A-4)

This project, initiated in March 1957, is a joint undertaking between the Oregon Department of Agriculture and the Oregon Agricultural Experiment Station. The objective is to develop methods and procedures for certification of virus-free nursery stock acceptable to local and export markets, and to establish a ready source of virus-free trees for orchardists.

On land assigned to the plant pathology department of the experiment station, an index block has been established where plantings of 700 to 800 trees have been made since April 1956. Under a signed agreement, 25 nurseries are cooperating, and their sources of scion wood were mapped and labeled for testing in the index block to discover virus diseases. Work the first year was principally on cherries, and it will be extended to include peaches and prunes.

In line with the nursery improvement aspects of the program, 9,150 approved buds were supplied to cooperating nurserymen to encourage them to establish mother blocks which will serve as a basis for the certification program.

Improving estimates of crop production (filberts) (ORE-D-1)

The work under this project is designed to develop and test objective methods of sampling in order to improve the accuracy of total production estimates for filberts and to discover and evaluate preharvest indications of the quality and size composition of the crop.

From the probability sample of orchards and trees established for this project, counts were made July 22 through August 15, 1957, of nuts per tree, average weight per nut, and percent defects. Since similar data were obtained for the 1956 crop in a similar sample survey, it was possible to employ a ratio method, based on counts and weights and adjusted for percentage defects and date of shell hardening, in forecasting 1957 production. Progress to date indicates that the estimates of count and weight can be determined with satisfactory precision, but additional work is needed to improve the accuracy of estimates of percentage defects and the date of shell hardening. The percentage of blank nuts is an important determinant of quality, and considerable effort is being made under this project to discover factors which are associated with this condition.

The work revealed that the size composition of the filbert crop can be predicted from samples collected about 5 to 6 weeks before harvest. A procedure for estimating sizes will be developed for testing next season.

## PENNSYLVANIA

### Expanding market outlets (PA-B-1)

Activities under this project did not get underway until late in the reporting year. Assistance was given the Pennsylvania Horticultural Association in planning and conducting "Pennsylvania Peach Time." One feature of this program for which the Pennsylvania Department of Agriculture was primarily responsible was a contest staged at York, Pa., to select the peach dessert champion of the State. Department specialists also developed a model TV program which the champion used in peach promotional activities over the State. Assistance in developing publicity and promotional ideas was provided the poultry industry in connection with the Pennsylvania Poultry Festival and Pennsylvania Broiler Week. Similar assistance was given the dairy industry in conducting the June Dairy Month promotion. The department started a monthly publication designed to keep industry groups informed about promotional activities planned and underway.

### Improving marketing facilities and methods (PA-C-1)

This project was not activated because of inability to obtain qualified personnel.

### Providing basic data (Christmas trees and eggs) (PA-D-1)

In cooperation with the Extension Service and the Pennsylvania Christmas Tree Growers Association, the Pennsylvania Crop and Livestock Reporting Service made a survey to determine the status of and trends in the Christmas tree industry in the State. This survey, the results of which are being analyzed, will provide information on present acreages, ages of trees, species, and the volume of annual sales. Additional surveys were planned for the 1957 marketing season to obtain information for release to growers on prices by areas, ages of trees, and species, and types of transactions.

To provide basic information needed to improve egg marketing, a survey was made during the year among egg producers of the State and the data were made ready for publication. The information collected related to such factors as the geographical distribution and concentration of egg production in the State, size distribution of flocks, breeds of layers, methods of sale and sales outlets, frequency of delivery, and grades and sizes of eggs sold.

### Fruit tree survey (PA-D-2)

At the request of the Pennsylvania State Horticultural Association and individual growers, the Pennsylvania Crop and Livestock Reporting Service conducted a complete survey of commercial orchards in the State to determine the numbers, ages, and varieties of apple, peach, and sour cherry trees. At the end of the reporting period, the data had been summarized and the material was being prepared for publication.

## PUERTO RICO

### Improving the quality of processed products by use of quality standards and regulations (PR-A-1)

Work continued on developing grade standards and regulations for processed agricultural products grown in Puerto Rico, to be used to improve and maintain the quality and uniformity of these products. Attention was given during the year to gandures, guava nectar, and native white cheese.

Gandures. --Work on the development of grade standards and marketing regulations for gandures was continued. (Gandures are a variety of tropical peas used as a substitute for dry beans.)

During the year, about 300 samples of gandures, representing all the brands processed in Puerto Rico, were analyzed to obtain information on such factors as the drained weight, viscosity, color of packing medium, color and maturity of the peas, and defects. The data obtained from the analysis were used in developing proposed grade standards which were presented to the industry for its recommendations.

Canned guava nectar. --The guava, a nutritious tropical fruit that grows in all parts of Puerto Rico, is used in the preparation of desserts, puree, and nectar. The Puerto Rican Department of Agriculture and Commerce, in recognition of the marketing problems caused by the varied appearance and quality of different lots of nectar being processed, began work in April 1956 to bring about greater standardization of quality through the development and issuance of grade standards. During the last year, over 100 samples of different brands of guava nectar, processed in Puerto Rico and other countries, were analyzed and rated for such factors as soluble solids, viscosity, acidity, centrifuge solids, mold count, sediment content, aroma, color, and taste. The results of the analyses and tests were used in developing quality standards and in making recommendations on quality improvement to the processors.

One of the results of this work was the development of an inexpensive viscosimeter, for measuring viscosity. The design of this instrument and the preparation of the temperature correction table needed in using it were developed primarily by the marketing specialist of the Processed Products Standardization Section, AMS, USDA, who worked on this project with the Puerto Rico department.

Native white cheese. --"Quesno blanco del pais," or "native white cheese" is a Puerto Rican cheese product. This product is now of highly variable quality. Work was undertaken to develop standards which would assist processors in the manufacture of a uniformly high-quality cheese product. During the year, several samples of this cheese were analyzed for moisture, fat content, and bacteria count. The data obtained from this analysis were used as the basis for a set of proposed quality standards.

General. --A proposed regulation covering minimum requirements for quality and sanitary conditions for plants processing agricultural products in Puerto Rico was prepared. The requirements as outlined in the regulation were the result of a careful study of processing establishments in Puerto Rico and of the provisions of similar regulations used in the States and foreign countries.

Improving the grading, packaging, and merchandising of fruits and vegetables (PR-B-1)

Work was continued to improve the practices and methods of grading and packaging Puerto Rican fruits and vegetables shipped to the New York City market. Exports of these products to this market are now valued at nearly 4 million dollars annually. Prospects are for a considerable expansion in export sales provided needed improvements are made in grading and packaging the products. Uniform grades and packages for pineapples and mangoes have been developed, tested, and established under export regulations. These developments have stimulated export business in these products. Efforts were continued to achieve similar uniformity in grading and packaging other fruits and vegetables, such as cucumbers, tomatoes, limes, plantains, taniers, yams, peppers, ginger root, and pigeon peas, entering into the export trade. Work also was continued on the development of a general export regulation designed to prevent certain undesirable marketing practices and to improve the acceptance of Puerto Rican fruits and vegetables in export markets. This proposed general regulation, which is to be the subject of public hearings, would provide authority for establishing specific grade and container requirements for individual products.

As a phase of the work to improve the marketing of exported products, the Puerto Rican department has stationed a marketing specialist in New York City to observe the quality and condition of products upon arrival and to report this information back to the department for its use in advising shippers of needed changes in grading, packaging, and handling. Precooling of some products before shipment was found necessary to avoid serious losses from decay and spoilage in transit.

Work was continued to improve the marketing of fruits and vegetables used locally. At the request of municipal officials of Vega Boja and Bayamon, department specialists prepared regulations for the wholesaling of fruits and vegetables at new markets opened in these municipalities. Assistance was provided to fruit and vegetable producers and dealers in adopting improved grading and handling practices at the new assembly market at Naranjito. The work extended into the retailing of fruits and vegetables. Assistance was given to 30 retailers in selecting equipment, planning back-room and display layouts, and trimming, displaying, and pricing these commodities. This program included the training of produce personnel in 17 of the stores.

Improving marketing facilities (PR-C-1)

A survey was completed the preceding year to appraise the condition and operation of marketing and processing facilities and to project future needs. The data obtained in this survey were analyzed this past year and a report was prepared.

This report contains recommendations on improvements needed in marketing and processing facilities, type of marketing facilities needed in certain areas, and needed improvements in marketing practices for livestock, poultry, dairy products, and pineapples and other fruit and vegetable crops.

## SOUTH CAROLINA

Improving and expanding production data and other marketing information (SC-D-1)

Under this project, the South Carolina Crop and Livestock Reporting Service provides producers and marketing agencies with a wide variety of information needed in planning marketing programs. Much of the information had not been available previously; in other instances, the information was available on a State basis, but not by areas within the State. Data of the latter type are much in demand in the State because of changes and shifts that have been taking place in farming. Accordingly, special efforts were made during the year to develop and publish county estimates for corn, cotton, tobacco, wheat, oats, livestock, and poultry. County estimates were prepared for release on soybeans, peanuts, barley, watermelons, and tomatoes.

Examples of reports being released under this project include (1) weekly estimates of eggs set and chicks and poults hatched, (2) monthly estimates of livestock slaughter, (3) estimates of the calf crop, lamb crop, chickens raised, and wool production, (4) acreage and production estimates for such vegetable crops as broccoli, sweet corn, and spinach, which are increasing in importance, (5) estimates of peach production by varieties, and (6) estimates of pecan production.

## SOUTH DAKOTA

Providing marketing information and basic data (SD-D-1)

Poultry and eggs. --A survey of methods of marketing chickens and eggs was completed, and a bulletin, "South Dakota Poultry, Production and Marketing," was issued. This publication shows the changes in the marketing of chickens and eggs in the last 6 years, and points out some of the problems in improving quality and expanding outlets.

Hogs. --The quarterly pig surveys were continued. These quarterly reports enable farmers to market hogs more nearly in line with the needs of the market.

Grain. --Storage capacity for grain was again reported by counties in the annual statistical bulletin on South Dakota agriculture.

County data. --The South Dakota Crop and Livestock Reporting Service added three counties to the list of those for which it has prepared and issued county data bulletins. These additional counties are Lake, Spink, and Hanson.

## TENNESSEE

### Improving marketing methods and expanding outlets (poultry and eggs) (TENN-A-1)

Demonstrations to groups and individuals were continued on proper methods of candling, grading, packing, and merchandising eggs. This work is designed to improve the quality of eggs reaching consumers and to promote the development of a graded-egg buying program so that producers may be rewarded for their efforts to improve quality. This program has made it possible for Tennessee producers to secure additional outlets to several large retail food chains, for example. Producers selling eggs on a grade basis have been able to realize price premiums ranging from 5 cents to 30 cents per dozen. The program of assisting consumers in understanding official egg grades and size classifications was continued, in cooperation with the Extension Service.

Work was expanded in the area of improving the efficiency of poultry processing. Plant surveys were made to determine the changes in facilities, equipment, and methods needed to increase efficiency and improve the wholesomeness of the product.

### Improving livestock marketing methods (TENN-B-1)

Activities under this project were designed to promote the use of official grades in marketing the State's livestock and wool, and to foster selling programs under which grade differences would be adequately reflected in price. As in previous years, several special livestock sales were arranged to demonstrate grading procedures to producers and buyers, and to provide an efficient means of selling graded livestock.

There were increases in both the number of special sales of feeder calves (15 compared with 11) and in the volume sold (7,673 head compared with 4,785 head). It is estimated that the calves sold through these sales, representing about 18 percent of total sales of feeder calves in the State, brought price premiums to producers ranging from 1 1/2 to 2 cents per pound. This continuing program to improve the marketing of feeder calves was seriously needed, because previously most quality feeder calves had been sold at weaning time on slaughter markets where they were heavily discounted because of lack of finish.

Assistance was given again in conducting the 12 lamb pools operating in the State. The major activity was the demonstration of official lamb grades through actual grading of the lambs sold through the pools. This assistance resulted in uniform classification of lambs from pool to pool, which tended not only to stabilize prices but also to increase demand from buyers who could not be present at the sales. Confidence in the grading system was such that some buyers who could not attend the sales mailed or wired in their bids on certain grades. Prices received by lamb producers through these pools were estimated at 1 cent per pound above prevailing prices at alternative country markets.

More emphasis was given this year to the program of improving hog marketing. Live hog and carcass grading demonstrations were held in cooperation with the Extension Service, packers, and marketing agencies, to encourage the buying and selling of hogs on a grade basis.

Work was continued with 10 of the wool pools in the State, which the Tennessee Department of Agriculture had helped to organize in past years. Specialists utilized these pools as demonstrations of the value of selling wool on the basis of standard grades. It is estimated that this service added at least 2 cents per pound to the selling price of the wool.

Providing special marketing information (TENN-D-1)

Daily reports on market conditions and prices for eggs and broilers and other poultry were continued.

## TEXAS

Improving egg marketing (TEX-A-1)

After passage of the Texas Egg Law in the spring of 1957, the Texas Department of Agriculture, in cooperation with the Extension Service, organized a series of meetings to explain to producers, dealers, and retailers the requirements of the law and to demonstrate how to grade eggs in accordance with official standards. These meetings, where attendance was as high as 375 persons, were supplemented by a series of feature articles on the egg law and on methods of maintaining egg quality, published in leading farm and trade publications and newspapers of the State. This work was undertaken to assist producers and marketing agencies in preparing for compliance with the new law, the enforcement phase of which was to begin in the spring of 1958.

Improving quality and grading and handling practices, and expanding outlets (TEX-B-1)

Sweetpotatoes. --The Texas department continued its cooperative program with the Extension Service and farm organizations to encourage the use of official grades in marketing sweetpotatoes. At 61 meetings in 44 sweetpotato-producing counties, specialists explained and demonstrated the advantages of grading and packaging in standard containers. Particular stress was given to the importance of proper curing and storing methods in obtaining the quality of product desired by the trade. Another activity to improve the quality of sweetpotatoes was the establishment of an information service providing commercial growers with the names and addresses of growers producing certified seed stock.

The program to improve quality and packaging has produced encouraging results. Last year, about 60 percent of the Texas crop moved to retail outlets on a grade basis. This compares with less than 30 percent 2 years ago, before initiation of this program. Most of the fresh-market shipments this year were made in standard 50-pound crates, whereas 2 years ago shipments were largely in bulk with large losses from damage in handling and shipping.

With the improvement in quality and packaging as a selling point, the Texas department set up an informational program to acquaint wholesalers, retailers, and consumers with the work the industry was doing to improve the product, and to encourage increased purchases.

Watermelons. --The Texas department continued its buyer information program to promote orderly movement of the watermelon crop. Before and during the watermelon marketing season, the department assembled data from the 44 important producing counties on expected marketing periods, names and addresses of shippers, and location of shipping points. These data were published in a bulletin, including a map showing truck routes, and distributed to buyers at major buying points. During the marketing season, information on prices and supplies was collected and released three times weekly to news and radio wire services. Marketing specialists stationed in the producing areas handled numerous special requests from buyers and sellers for information on sources of supply and outlets.

The program helped to move the crop of about 16,000,000 melons into marketing channels in an orderly manner. Both shippers and buyers commended the program highly and urged that it be continued.

Grain.--During the harvest of small grains, storage facilities in some producing areas of the State become overtaxed. Several years ago, during a critical storage situation, grain warehousemen requested the department to make a survey of storage facilities to determine where the shortages and excesses, if any, of storage space were located. This activity was continued last year and, as a result, storage was readily located for nearly 5,000,000 bushels of grain which otherwise would have been exposed to the weather for a considerable period, with losses potentially amounting to about $1,000,000.

## VERMONT

### Improving milk quality (VT-A-1)

This program was started in 1956, to improve the flavor of milk marketed from Vermont dairy farms and increase its usage in fluid form. Only about two-thirds of the milk produced in Vermont is sold for fluid use, and any increase in fluid use would increase producer returns. Progress was made during the year in securing the cooperation of milk plants in periodically testing each producer's milk for flavor. Where these tests revealed off-flavor, the dairy specialist and plant fieldmen assisted the producer in eliminating its causes. In addition to providing individual assistance, the specialist held meetings with producers to explain practices necessary in marketing milk of good flavor.

The specialist surveyed all milk-handling plants in the State, to determine what improvements in equipment and milk handling procedures were needed to prevent off-flavors. Where unsatisfactory conditions were found, improvement recommendations were made to plant management.

The use of amber glass bottles as retail containers to prevent flavor changes due to light exposure was promoted, and 18 distributors in the State have adopted this container for at least a part of their milk deliveries. Exhibits were shown at two of the larger fairs in the State to acquaint consumers with types of packages that protect good milk flavor.

The success of this program is attested by requests from two of the largest milk distributors in New England that the program be expanded to include out-of-State points where Vermont milk is sold, and by establishment of a similar program by the Massachusetts Department of Agriculture, at the request of the dairy industry.

## VIRGINIA

### Improving marketing methods (eggs) (VA-A-1)

The Virginia Department of Agriculture and Immigration assisted in organizing the Virginia Egg Council, composed of representatives of the hatchery, feed, marketing, and producer segments of the egg industry, which developed a recommended program to improve the marketing of Virginia eggs. A survey made by the department among egg handlers revealed that two important problems retarding the growth of the Virginia egg industry were inefficient assembly and inefficient handling methods in grading and packaging. Improvements in these operations are among the goals of the department and the council under the new program. Some work on these problems was initiated by the department during the year. For example, marketing specialists, by reorganizing pickup routes, were able to show one egg handler how he could save 200 miles and 11 overtime hours on each day's assembly operations.

Improving grading and marketing methods (livestock) (VA-B-1)

The program of buying hogs by grade, started by the department in the Richmond market, was extended to include three major packing plants at other points. Special sales were again arranged for slaughter cattle and stocker ewes. The slaughter cattle sold through these special sales brought the producer nearly $7 per head more than they would have returned through regular auction sales. Extra returns for stocker ewes sold in this manner were about $2 per head. One of the primary purposes of these special sales is to acquaint producers with official livestock grades and the advantages of selling on a grade basis. Grading demonstrations also were conducted on farms to aid producers desiring to make direct sales to packer buyers.

Improving marketing practices (fruits and vegetables) (VA-B-2)

Strawberries. --Assistance was provided to strawberry growers in the Lee County area in developing an organization to improve the marketing of berries. Specialists of the Virginia department also gave demonstrations of proper harvesting and packing practices and assisted in finding market outlets. Continued assistance was provided berry growers on the Eastern Shore of Virginia in the program to improve quality and expand outlets, started last year.

Apples. --Under the marketing service program of the Virginia department, apple growers can form "apple rings" and, as members of these organizations, receive assistance from marketing specialists in improving the grade and pack of fruit and in finding outlets. Two such organizations were in operation in the State last year.

The department completed a survey of the commercial apple and peach orchards in the State and issued a publication giving the ages and varieties of trees.

Improving methods and facilities for handling and storing (grain and hay) (VA-C-1)

Several marketing centers were established at country elevators during the wheat harvest to assist producers and elevator operators with grain marketing problems and to encourage improved grain marketing practices. Demonstrations of official grain grading procedures and the quality factors affecting grade were a featured part of the program at these centers. Other marketing services at the centers included the dissemination of price information, assistance to elevator operators on problems of equipment arrangement and operation, and assistance in establishing grade-price buying systems.

Specialists of the Virginia department assisted producers in the surplus hay-producing area of southwest Virginia in finding outlets for hay in the northern Virginia deficit area. A quality-testing service for soybeans was started, and information concerning the quality of the crop was disseminated to prospective buyers.

Improving tomato processing (VA-C-2)

The Virginia department continued work on a program to improve the quality of canned tomatoes and tomato products and to increase the efficiency of processing operations. Since the program got under way in 1951, the volume of substandard tomatoes has been reduced by 60 percent, and processing efficiency increased through installation of continuous cookers, adoption of improved conveyor equipment, and addition of storage facilities permitting more mechanization of the handling operations involved in storage. Improvements also have been made in plant sanitation. For example, all plants now have stainless steel inspection tables, compared with less than 50 percent in 1951.

Improving marketing facilities and handling methods (VA-C-3)

Eggs. --Marketing specialists surveyed eight egg assembly and grading plants during the year. These plants are being assisted in adopting improvements which the surveys indicate are needed.

Apples. --Improvements in equipment, packinghouse layout, and management and labor efficiency made in four packinghouses, as a result of marketing service work of the Virginia department, enabled these concerns to save about $25,000 a year.

Providing special market information (VA-D-1)

The Virginia department continued to provide producers and marketing agencies with information on both the short-term and long-term outlook for farm commodity prices. The department's weekly report "Farm Price Outlook" is made available to the newspapers and radio and television stations in the State. This report is based on an analysis of the market situation by the department's statisticians, marketing specialists, and market news personnel.

## WASHINGTON

Improving marketing methods and expanding outlets (WASH-B-1)

Honey. --At the request of the Central Washington Beekeepers' Association, the Washington Department of Agriculture made a survey among processors, distributors, and retailers to determine what promotional activities would be most effective in increasing sales of honey. The results were presented to the honey marketing committee of the association and were used in planning a promotion program involving the following activities:

1. Demonstrations before high school home economics classes of various ways honey can be used in food preparation.

2. Demonstrations on television of cooking techniques using honey. During the televised demonstration, a brochure, "Honey for Holiday Treats," was offered to the public. This brochure was paid for by the beekeepers' association.

3. Dissemination of honey recipes through newspapers and trade papers.

4. Cooperation with hotels and restaurants in stimulating increased honey usage by providing menu clip-ons.

Reports from the honey industry indicate that these activities assisted in marketing more honey.

Rhubarb. --A decline in demand for hothouse rhubarb from Washington led the two grower associations in the State to ask the aid of the Washington department in developing a marketing program to reestablish outlets and discover new ones for the product. As the first step in this program, the department made a survey and analysis of the rhubarb market, and reported the results to the industry. The survey report revealed that nearly 80 percent of the households in the State do not purchase the product, and indicated a market potential of some 600,000 families in the State alone. Specific recommendations on improvements needed in grading, packaging, and prices were made in the report, together with suggestions for planning and conducting an advertising and promotional program.

Providing special market information and basic data (WASH-D-1)

Agricultural data on a county-by-county basis are needed by various commodity groups and private and governmental agencies in planning and conducting marketing programs. This need has become particularly acute since passage of the Agricultural Enabling Act by the 1955 legislature. The legislation permits producers to organize themselves into commodity groups to promote better marketing of their products. County data are of much value to these groups in organizing and operating under the statute. During the year, such data were assembled and published for Spokane, Stevens, Chelan, Whatcom, Clark, Pierce, and King counties. This brings to 12 the number of counties for which reports

have been published. Bulletins for the other 27 counties are in various stages of preparation. Urgent requests were made for reports on three counties, to provide data for planning and community study groups meeting in late 1957. Three agencies--the Washington State Department of Commerce and Economic Development, the Washington State Bureau of Community Development, and the Bureau of Business Research at the University of Washington--have requested complete series of the reports for use in planning community and county economic development.

## WEST VIRGINIA

### Improving marketing methods (WVA-B-1)

Livestock. --In the livestock program last year, increased emphasis was placed on the development of selling by grade, greater uniformity in grade interpretations from market to market, and proper preparation of animals for market. The advantages of selling livestock in lots of uniform grade and weight were demonstrated at special and auction sales. For example, more than 17,000 head of feeder calves were graded and sold through 31 special sales sponsored jointly by the West Virginia Department of Agriculture, the West Virginia Livestock Association, and the West Virginia Agricultural Extension Service. Similar sales were held for feeder cattle. The animals sold through these special sales brought at least $1.50 per 100 pounds more than if they had been ungraded and sold through conventional outlets. Greater effort was made to develop the auction market as the focal point around which to build a better marketing program for livestock. Auction managers, producers, and buyers were encouraged to cooperate more closely in improving the functioning of these markets.

Poultry. --The buyer informational programs covering broilers, developed by the West Virginia department under this project, has proved so successful that it was financed entirely by fees during the last year.

Eggs. --The West Virginia department assisted in establishing an additional auction market for eggs. After the opening of this market, there was an immediate improvement in producer prices in the area which it served. At another market, assistance was given in providing refrigeration facilities so that the eggs consigned by producers could be kept at proper temperatures. Egg producers using this market were assisted also in grading and candling eggs to meet consumer requirements. Formerly all eggs sold on this market were of wholesale grades. This change in marketing practice has enabled producers to realize an additional 2 to 6 cents per dozen.

Fruits. --The department and the West Virginia Horticultural Society continued their joint program, initiated in 1954, of providing an information service to truckers and other buyers of fruits on the availability of West Virginia apples and peaches. Under this program, growers having fruit for sale supplied the department daily with figures on quantities, varieties, grades, sizes, and asking prices. The department, in turn, passed on to buyers this information and the location of the growers, through an information center established for this purpose and through printed media. Marketing specialists assisted growers using the grading facilities at the Inwood Farmers Market in adopting methods of grading and packing necessary to realize maximum returns. The growers realized about 25 percent more for their fruit than if it has been sold on a field-run basis or to processing outlets.

Vegetables. --The department continued its program to improve vegetable marketing through demonstrations of proper harvesting, grading, and packaging methods. An increasing number of vegetable growers are responding to efforts of the department to encourage the use of official grades and standard containers.

Tobacco. --The tobacco marketing specialist of the department continued to assist growers in improving their methods of harvesting, storing, curing, stripping, and grading tobacco.

Other products. --The department continued its program to develop outlets for such products as black walnuts and mayapple roots.

Providing new basic data and experimental market news (WVA-D-1)

At the request of the fruit industry, an apple and peach tree survey was conducted in the commercial area of the State. This was the third such survey since 1949 under this project. The schedule used was consistent with those used by other States in the Appalachian region, so that the data would be comparable. The report is being prepared.

Poultrymen and dairymen were provided with current information on trends in production, prices, cost of feeds, and the general outlook. This information was of special value to egg producers last spring in making decisions regarding flock replacements.

In response to numerous requests for more adequate livestock marketing information, the market news program was expanded to include coverage of 18 of the 23 livestock auctions in the State. Reports submitted by official State graders on transactions at each auction provided the basis for the expanded service. These reports made it possible to achieve comparability of grade-price quotations from market to market. The volume and price information obtained was disseminated through mailed reports and the press and radio.

County data for crops and livestock were again prepared and published in the bulletin "Agricultural Statistics."

## WISCONSIN

Improving quality (dairy products) (Wis-A-1)

Countywide quality improvement programs for dairy products at the producer and plant level were conducted in Price, Sheboygan, and Wood counties during the year. The project specialist worked with producers and dairy plants in identifying the causes of quality defects in milk and dairy products and in obtaining the adoption of corrective measures. On the basis of recommendations by the specialist, participating plants made additions and changes in facilities and equipment needed to improve product quality. Establishment of a can replacement program, adoption of more effective can washing procedures, and curtailment of the use of salvage materials, such as salt drippings, drain table whey, and "drip" milk from dairies, were among the measures adopted by the plants in the quality improvement program.

This program has achieved a significant improvement in milk quality based on sediment and bacteriological tests. For example, in Price county last year, 80 percent of the milk was No. 1 by bacteriological test, the highest percentage since the start of the program in this county about 6 years ago. In Wood county, the amount of milk that was undergrade on the basis of the bacteriological test was reduced by about 1 percent and the amount of milk rejected at the plant was 1 percent less than the previous year.

The increase in the quality of Wisconsin butter has been significant during the past 6 years. For example, butter samples obtained from comparable areas of the State in 1951 indicated that 41 percent scored Wisconsin Grade AA or A, 36 percent Wisconsin grade B, and 37 percent Wisconsin undergrade. In 1956, 55 percent scored Wisconsin AA or A, 36 percent Wisconsin grade B and only 5 percent Wisconsin undergrade. The annual increased returns from the improved quality of butter are estimated at $240,000.

The dairy specialist also assisted cheddar cheese processing plants in Sheboygan county to improve the quality of their product through work with producer-patrons in reducing bacteria count in milk delivered. At one plant, for example, the first plant check of the bacteria count of milk delivered by patrons, made in December 1956, showed an average DMC (direct microscopic count) of 1,200,000 per milliliter, compared

with an average count of only 376,000 per milliliter in the hot and humid weather in August. A significant improvement resulted from this work in the quality of cottage cheese produced at this plant.

In cooperation with the University of Wisconsin, work was begun in November 1956 on a pilot plant basis on quality improvement for nonfat dry milk. The resazurin, standard plate count, and direct microscopic tests were made of incoming milk, line samples were taken, and samples of powdered milk were tested. Preliminary results indicated that there is a direct relationship between the quality of the incoming milk and plant handling methods in relation to the bacteriological quality of the powdered milk. Work will continue on this project during the next fiscal year.

During the year, flavor tests were made of milk obtained from 117 plants. Each plant was furnished with the results of the organoleptic test and the identification of the cause of off-flavors. The results of the tests indicate that more work is needed on milk flavor problems.

The Wisconsin Department of Agriculture published a periodical newsletter, "The Vat," to disseminate information to improve plant operations and conditions affecting the quality of dairy products. Topics covered in the newsletter were: Rodent control, proper cheese drying, milk quality tests, equipment sanitation, and effective field service.

Improving marketing practices, expanding outlets, and conducting experimental market news (Wis-B-1)

Dairy products.--Cheese Week promotional campaigns were conducted in 10 out-of-State markets during the year. The Wisconsin department assisted retailers and distributors of Wisconsin cheese in these 10 markets in planning and conducting promotional campaigns. The cooperating retail stores reported substantial increases in sales of cheese during the promotional period. Most kinds of Wisconsin cheese were displayed at the demonstrational stores. However, cheddar cheese was the most popular and showed the greatest increase in sales.

In-State promotional efforts to increase the sale of Wisconsin dairy products included June Dairy Month and October Cheese Festival, conducted with the cooperation of the American Dairy Association of Wisconsin, the Extension Service, and producer and industry groups. Promotional campaigns were conducted also for ice cream and cottage cheese. Cooperation in the dairy promotions was obtained from almost every agricultural organization and from every county in Wisconsin. Reports from leading Wisconsin chains and large wholesale grocery organizations indicated sales gains in June 1957 over June 1956 of 24 percent for ice cream, 17 percent for milk, 16 percent for cheese, 12 percent for dry milk, 10 percent for cottage cheese, 7 percent for butter, and 3 percent for evaporated milk. The increase in sales of Wisconsin dairy products during June Dairy Month was estimated at 17,788,075 pounds of milk equivalent, representing an additional return of about $60,000 to Wisconsin dairy farmers.

Marketing specialists also planned and developed dairy-product exhibits and displays for use at State and national conventions.

Fruits and vegetables.--Work under this project in the vegetable field included assembling and preparing material for drafting an enabling act to permit marketing orders for Wisconsin agricultural commodities. An enabling act, based on this work and supported by the State Potato Growers Association and the Wisconsin Farm Bureau Federation, was passed at the 1957 session by the State legislature. The project specialist assisted in conducting a survey of potato processing plants in several other States and in the preparation of a report on potato processing possibilities in Wisconsin.

The Wisconsin department cooperated with the Wisconsin canning industry in a promotional program to market a corn pack substantially larger than normal. An intensive

campaign utilizing radio and television announcements and news articles was conducted from December 1956 to April 1957 to encourage consumers to purchase canned corn in case lots. The promotional campaign was reported to have been important in moving the surplus and in enabling canners to contract raw material for the following season's pack at no reduction in prices to growers.

Project specialists also engaged in designing and supervising the construction of potato exhibits for 3 Statewide meetings attended by an estimated 100,000 persons.

Wisconsin producers of red cherries, apples, cranberries, honey, and maple products were assisted by department marketing specialists in their promotional efforts to expand market outlets. In the cherry promotional program, the major effort to find new market outlets was concentrated in Iowa, Minnesota, and other nearby States. Posters and promotional brochures were distributed to participating stores. Promotional work also was continued in the State, and exhibits to promote the sale of red cherries were developed and displayed at the Wisconsin State fair and at the Wisconsin Restaurant Association convention.

The Wisconsin department, in cooperation with the Wisconsin Apple Institute, conducted a promotional program to expand in-State markets for apples. The apple promotion consisted of radio and television programs, distribution of point-of-sale material supplied by industry, nutritional recipe releases, and information on availability and uses of apples by variety.

The department provided assistance in the promotional program to expand market outlets for cranberries, honey and maple products. This program emphasized proper processing, packaging, and grading as necessary to expand market outlets for these products. During the year, several conferences were held with the respective industry groups on proper methods of grading and packaging of honey, maple syrup, and cranberries. The promotional campaign was supported by television and radio programs and by displays at major conventions. As a result, increased sales were reported for maple syrup, honey, and special cranberry items.

Poultry and eggs. --The department, in cooperation with the Wisconsin Poultry Improvement Association, Wisconsin Turkey Federation, and Extension Service, provided merchandising assistance to wholesalers and retailers in four national promotional campaigns of the Poultry and Egg National Board--March Egg Month, Turkey for Easter, Fall Poultry Festival, and Turkey for Holidays. The major emphasis was put on March Egg Month, as about two-thirds of Wisconsin poultry producers' income is from eggs. News releases, radio spots, and television programs emphasizing the inclusion of poultry and eggs in planning food budgets were applied to the poultry and egg campaigns.

Livestock and meat. --The department, in cooperation with the meat industry and State agencies, launched a pork promotional program during October and November of 1956, when especially large supplies of pork were in prospect. News tips, meat recipes, and point-of-sale material were effectively used. Five thousand copies of a poster, "Put Pork in the Picture," were distributed to retail outlets in the State. This promotion was reported to have stimulated increased pork consumption. Another phase of the meat promotion program included meat exhibits at the Wisconsin State fair.

The department, in conjunction with the College of Agriculture, provided assistance in organizing the Equity Cooperative Livestock Auction at Richmond Center to provide modern auction facilities.

The lamb pools which the department assisted in organizing have doubled their volume in each of the last 3 years. A total of 11,263 lambs and feeders were sold at 6 market lamb pool sites during 1956.

Tobacco. --The department continued its program of providing marketing information to the Wisconsin tobacco industry. Each day during the marketing season, price information

was collected and disseminated by press, radio, and television, covering the two types of tobacco grown in Wisconsin--types 54 and 55. Data on prices and sales also were summarized and published weekly for the season.

Providing technical assistance to marketing agencies in improving operations (Wis-C-1)

The department continued its program of assisting marketing agencies in improving their operations. Under this project, many cooperative associations have been assisted with problems relating to consolidation, financing, and the building of large multiple-product plants. It is reported that multiproduct dairy plants developed under this program have been able to make increased returns to dairy farmers amounting to thousands of dollars annually because of their greater efficiency and leadership in improving quality.

Meetings were held with boards of directors and members of cooperatives to explain the opportunities and advantages in consolidation of dairy plant operations. Meetings were held with managers and bookkeepers of cooperative organizations on maintaining adequate and uniform accounting records.

Assistance was provided in the organization of a feeder pig cooperative, which assisted producers in finding market outlets at satisfactory prices.

Providing new basic data (Wis-D-1)

In recognition of the need for new basic information as one of the tools necessary to the solution of marketing problems, the Wisconsin Crop and Livestock Reporting Service conducted the following activities the past year.

Dairy products.--Three comprehensive dairy marketing information bulletins were published during the year. Bulletin No. 66, entitled "American Cheese," includes such items as discussions of the various styles of American cheese by size, shape, and weight, and the size and location of the cheese manufacturing plants. From the information in this report, it is possible for the first time to learn where and how much American cheese was produced in the various styles. This publication has been widely used by the cheese trade.

"Wisconsin Swiss Cheese," another comprehensive marketing information report, was prepared for publication during the year. The report includes such items as the types and quality of Swiss cheese produced, and prices received for milk in relation to the quality and grade of Swiss cheese produced. The bulletin gives a quantitative description of the change from wheel-type to rindless block-type production. The data indicate that the industry still has much progress to make before it reaches a complete changeover to the production of a rindless block with greater consumer acceptance.

Bulletin No. 67, "Wisconsin Produces and Markets Quality Milk," includes such information as a description of the Wisconsin fluid milk industry, figures on supplies of Grade A milk, size and location of dairy plants, utilization of milk, and markets for milk. This report provides the dairy industry with the essential background information for evaluating current data on the demand and supply situation reported in the monthly issues of "Wisconsin Dairying." About 8,000 copies of this latter publication are sent to dairy producers, dairy leaders, and marketing agencies in the State.

Livestock.--Special Bulletin No. 68, "Wisconsin Feeder Pig Markets and Prices," provides comprehensive information on feeder pig supplies, markets, and prices.

Collection of data on wool sales in Wisconsin was conducted under this project for the second consecutive year. These data on wool are being analyzed, and a bulletin is planned. This report will show such factors as production areas by grade within the State, prices received by grade, and distribution channels and market outlets for wool.

Wisconsin continued the publication of the quarterly pig reports started several years ago, now being released by 10 important hog-producing States.

Grain. --A comprehensive report on the production, varieties, utilization, and marketing of oats, barley, and wheat was prepared for publication during the year.

Cranberries. --Detailed information was obtained on the production, marketing and sale of Wisconsin cranberries. A report, based on complete coverage of sales agencies and producers of cranberries, will be published during the 1958 fiscal year.

Vegetables. --A comprehensive statistical report on Wisconsin vegetables is being prepared. This report will include trend data on vegetable production by counties, dating back to 1950, and will provide a comprehensive summary of the marketing of Wisconsin vegetables. Information by counties on the production of peas, sweet corn, and beets for processing will be made available for the first time in this report.

Basic farm and market price data. --A handbook is being prepared on basic farm and market price data. This report will make available for the first time detailed data on price and market movements of Wisconsin agricultural crops by State and local market areas.

The Wisconsin Crop and Livestock Reporting Service has completed county agricultural data bulletins for 38 counties. Plans are to publish similar bulletins for the other 33 counties in the State. The bulletins contain information on farm income, movement of products to market, market outlets, methods of sale, and marketing patterns.

## WYOMING

### Improving quality of eggs, meat, and dairy products (WYO-A-1)

The Wyoming Department of Agriculture conducted a series of meetings during the year at which demonstrations were given of proper grading, handling, and storage methods for eggs, poultry, meats, and dairy products. Continued assistance also was given to individual slaughtering and processing plants, cream stations, and retailers in improving the processing, grading, handling, storing, and displaying of meat and dairy products. Quality tests were continued on milk and cream received at dairy plants, and when the tests revealed excessive contamination, the producers concerned were assisted in eliminating the cause of the trouble.

As a result of the work done under this program, consumers can purchase Wyoming graded meat products with confidence. The improvement in consumer acceptance of locally processed meats has been reflected in an expansion in the State of livestock slaughtering and processing facilities. The quality improvement program for dairy products has made it possible to reduce the bacteria count permitted in Grade A pasteurized milk from 30,000 per milliliter to 20,000, and that for pasteurized cream from 60,000 to 40,000. The work done over the last few years to improve egg quality has enabled producers and handlers to comply with the recently enacted egg law with little difficulty. This egg law, which became effective in May 1957, requires that all eggs sold to the consumer be properly graded and labeled, and prohibits the sale of eggs below Grade B. After passage of this law, the Wyoming department conducted a program to inform producers and handlers of its provisions.

### Supplying basic data (WYO-D-1)

During the year, the data on the 1956 movement of Wyoming cattle were coded and transferred to computing cards, and the data on movement for 1953-55 were almost completely summarized. Preliminary work on the 1957 data was started to test the feasibility of a series of current reports on monthly cattle movement. Data on the wool incentive payment program were analyzed to determine the frequency distribution of the size and value of individual wool clips and the months in which clips were sold. Estimates were published of irrigated and nonirrigated crop acreages and production, and inshipments and outshipments of fluid milk and cream.

## RECENT MARKETING PUBLICATIONS BY STATES

### GENERAL

GEORGIA

Georgia Agricultural Facts 1900-1956, Georgia Crop Reporting Service, Athens, July 1957.

Also county data bulletins for Colquitt and Cherokee counties.

ILLINOIS

Illinois Agricultural Marketing Statistics, State Department of Agriculture, Springfield, October 1957.

MISSISSIPPI

Agricultural Statistics, 1956, Base Book Supplement No. 2, State Department of Agriculture, Jackson, June 1957.

MONTANA

Montana Agricultural Statistics, Volume IV, State Department of Agriculture, Helena, December 1956.

NEW YORK

Statistics from the 1954 Census of Agriculture in New York State, by counties, State Department of Agriculture and Markets, Albany, January 1957.

SOUTH CAROLINA

South Carolina General Crop Statistics, South Carolina Crop Reporting Service, Columbia, March 1957.

The Agriculture of Orangeburg County, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, June 1957.

SOUTH DAKOTA

South Dakota Agriculture, 1956, State Department of Agriculture, Pierre, March 1957. Also county data bulletins for Lake, Spink, and Hanson counties.

WYOMING

Wyoming Agricultural Statistics and Information, 1955-56, Bulletin No. 19, Cheyenne.

WASHINGTON

Series of county data bulletins--Stevens, Clark, and Chelan counties, State Department of Agriculture, Olympia.

### COTTON

SOUTH CAROLINA

South Carolina Cotton, acreage, yield, and production, 1956 (by counties), South Carolina Crop Reporting Service, Columbia, June 1957.

## DAIRIES AND DAIRY PRODUCTS

### NEW YORK

Statistics Relative to the Dairy Industry in New York State for 1955, State Department of Agriculture and Markets, Albany, December 1956.

### WISCONSIN

Wisconsin Swiss Cheese, Bulletin No. 339, State Department of Agriculture, Madison, June 1957.

Wisconsin American Cheese, Special Bulletin No. 66, State Department of Agriculture, Madison, December 1956.

Wisconsin Produces and Markets Ouality Milk, Special Bulletin No. 67, State Department of Agriculture, Madison, June 1957.

## FRUIT

### CALIFORNIA

An Internal Symptom for Identifying Fanleaf in the Grapevine, The Bulletin, Vol. XLV, No. 4, October - December 1956, State Department of Agriculture, Sacramento.

Peach Calico, One of Many Virus Diseases of Stone Fruits, The Bulletin, Vol. XLV, No. 4, October - December 1956, State Department of Agriculture, Sacramento.

Merchandising California Prunes, Marketing Survey Report No. 13, State Department of Agriculture, Sacramento, November 1956.

Acreage Estimates, California Fruit and Nut Crops, State Department of Agriculture, Sacramento, June 1957.

### ILLINOIS

Your Guide Map to Illinois Fruits, 1957, State Department of Agriculture, Springfield.

### KENTUCKY

Producer's Guide for Marketing Strawberries, State Department of Agriculture, Frankfort.

### MARYLAND

Apples and Peaches in Maryland, University of Maryland Department of Markets and Agricultural Marketing Service, USDA, College Park, February 1957.

### NEW JERSEY

The Blueberry and Cranberry Industries in New Jersey, State Department of Agriculture, Trenton, October 1956.

### NEW YORK

Fruit Tree Survey--Lake Ontario Area--New York--1957, State Department of Agriculture and Markets, Albany, November 1957.

Survey of Wineries and Grape Processing Plants, New York State--1956, State Department of Agriculture and Markets, Albany, March 1957.

VIRGINIA

Virginia Commercial Apple and Peach Tree Survey, 1956, State Department of Agriculture and Immigration Survey Bulletin No. 5, Richmond, January 1957.

## GRAIN

IOWA

Corn, in Iowa, State Department of Agriculture, Des Moines, January 1957.

KANSAS

Kansas Wheat Quality Survey, 1957, State Board of Agriculture, Topeka, August 8, 1957.

MINNESOTA

Minnesota's Flax and Soybean Industry, State Department of Agriculture, St. Paul, June 1957.

SOUTH CAROLINA

Series of reports on county acreage, yield and production of corn, oats, wheat, and soybeans, South Carolina Crop Reporting Service, Columbia.

WISCONSIN

Wisconsin Small Grains, Special Bulletin No. 69, State Department of Agriculture, Madison, June 1957.

## LIVESTOCK

KANSAS

Kansas Shorthorns, State Board of Agriculture, Topeka.

MISSOURI

Missouri Corriedales, State Department of Agriculture, Jefferson City.

Missouri Yorkshires, State Department of Agriculture, Jefferson City.

Missouri Durocs, State Department of Agriculture, Jefferson City.

Stay Ahead in the Race with Missouri Landrace, State Department of Agriculture, Jefferson City.

OREGON

Oregon's Pilot Program of Compulsory Meat Inspection, State Department of Agriculture, Salem, June 1957.

WISCONSIN

Wisconsin Feeder Pig Markets and Prices, Special Bulletin No. 68, State Department of Agriculture, Madison, June 1957.

## POULTRY AND EGGS

MINNESOTA

Minnesota's Turkey Industry, State Department of Agriculture, St. Paul, May 1957.

SOUTH CAROLINA

South Carolina Livestock and Poultry Statistics, South Carolina Crop Reporting Service, Columbia, October 1956 and March 1957 (supplement No. 1).

SOUTH DAKOTA

South Dakota Poultry Production and Marketing, State Department of Agriculture, Pierre, April 1957.

## TOBACCO

NORTH CAROLINA

North Carolina Tobacco Report, 1956-57, State Department of Agriculture, Raleigh, March 1957.

SOUTH CAROLINA

South Carolina Flue-Cured Tobacco, Crop of 1956 (acreage, yield, production, and value by counties), South Carolina Crop Reporting Service, Columbia, May 1957.

## VEGETABLES

CALIFORNIA

Expanding the Market for California Long White Potatoes, State Department of Agriculture, Sacramento, May 1957.

FLORIDA

Series of reports on weekly plantings of tomatoes by areas, 1956-57 season, Florida Crop Reporting Service, Orlando.

INDIANA

Performance of Processing Tomato Varieties in Indiana, 1956, Purdue University, Lafayette.

MISSOURI

Missouri Melons, Where You Can Find Them, State Department of Agriculture, Jefferson City, 1957.

NORTH CAROLINA

North Carolina Fruit and Vegetable Schedule of Movements, 1957, State Department of Agriculture, Raleigh, March 1957.

WASHINGTON

Washington Hothouse Rhubarb Marketing Survey, State Department of Agriculture, Olympia, September 1957.

## MISCELLANEOUS COMMODITIES

WASHINGTON

Pilot Honey Marketing Development Project, State Department of Agriculture, Olympia, April 1957.



☆U. S. GOVERNMENT PRINTING OFFICE : 1958 O - 470627